

CR-184170

EASTERN KENTUCKY UNIVERSITY

Department of Physics and Astronomy

APPENDIX

**Activation Calculations for
Trapped Protons below 200 MeV**

July, 1991

Final Technical Report

Contract # NAS8-36649

(Principal Investigator: C. E. Laird)

Prepared for

George C. Marshall Space Flight Center

Marshall Space Flight Center, Alabama 35812

EASTERN KENTUCKY UNIVERSITY

Richmond, Kentucky 40475

(NASA-CR-184170) ACTIVATION CALCULATIONS
FOR TRAPPED PROTONS BELOW 200 MeV: APPENDIX
Final Technical Report (University of
Eastern Kentucky) 192 p

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EASTERN KENTUCKY UNIVERSITY

Richmond, Kentucky 40475

COLLEGE OF NATURAL AND MATHEMATICAL SCIENCES

Department of Physics and Astronomy
Moore 351 606-622-1521

July 16, 1991

National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

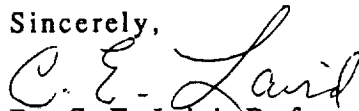
Dear Sirs:

Enclosed is the Final Technical Report on Contract # NAS8-36649 on a "Study of Activation of Metal Samples from LDEF-1 and Spacelab-2". This report is prepared by the Principal Investigator and any questions concerning this report should be addressed to him.

In accordance with the provisions of this contract this letter of transmittal and the following copies of the report have been sent to the addresses below:

AP29-H/B. Kilpatrick	0 copy
CN22D	5 copies
AT01	1 copy
CC01/Sheehan	1 copy
EM14A-46/McCranie	1 copy
ES62/Dr. Gerald Fishman	19 copies
NASA Scientific and Informational Facility	2 copies

Sincerely,



Dr. C. E. Laird, Professor of Physics

APPENDIX

Activation Calculations for Trapped Protons below 200 MeV

The following tables give the results of the activation calculations performed with the program PTRAP4. The computer printouts give the reaction, the reactant product, the proton reaction cross sections as a function of energy, the total activation in the sample, the activation as a function of the energy of the incident protons, and the activation as a function of distance into the sample from the exposed surface. The "reaction" refers to the emitted particle such as N refers to (p,n), 4N refers to (p,4n), etc. The product is the radioactive nucleus produced in the reaction and may be abbreviated in some cases such that Sn13 would mean Sn-113. The reaction cross sections are then given in the format of energy in MeV followed by the cross section in millibarns. Following the total activation in nuclei per day is the partial activation as a function of energy, the fraction of total activation in that energy region, and the interpolated flux of protons in that energy region. Finally, the activation as a function of distance into the sample is given. Each page is identified with a notation such as Al I-1 where Al indicates the target element Aluminum (TR stands for stainless steel trunnion sections)

and I the type of incident protons (normal or omnidirectional) and covering material. The incident proton covering material index is as follows:

- I-- Normal incidence with 2.57 g/sq. cm. aluminum covering
- II-- Uniform incidence with 2.57 g/sq. cm. aluminum covering
- III-- Normal incidence with no covering material
- IV-- Uniform angular distribution of incident protons with no covering material

However, aluminum and iron has been calculated with 5 grams/cm² covering material.

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PALD

THE TARGET IS AL
 TM,C, AND A ARE 26.980 184.000 5.200
 NCM= 10 NQM= 2 NMC= 3

THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.200
 THICKNESS OF COVERING MATERIAL 5.00

THE INELASTIC XSECTIONS FOR COVERING

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
10.00	610.00	17.00	690.00	30.00	700.00	35.00	660.00	40.00	650.00
60.00	500.00	100.00	425.00	225.00	400.00	340.00	402.00	460.00	422.00

THE INELASTIC XSECTIONS OF THE TARGET

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
20.00	1611.00	25.00	1617.00	30.00	1649.00	35.00	1703.00	40.00	1740.00
50.00	1748.00	60.00	1776.00	100.00	1662.00	225.00	1600.00	340.00	1626.00

 TARGET THICKNESS 5.271 CM/CM**2 WIDTH 5.080 CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 3

THE NUMBER OF REACTIONS EQUAL 3
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15

MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY
1.0	211010.0	1.5	129570.0	2.0	120000.0	2.5	120000.0	3.0	113220.0
3.7	113180.0	4.5	113430.0	6.0	108220.0	10.0	86539.0	15.0	59873.0
30.0	43843.0	50.0	36390.0	100.0	25811.0	200.0	10794.0	300.0	4017.6

THE NUMBER OF CROSS SECTION DATA POINTS IS 31

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	23.71 MEV
37.40	0.80	44.10	2.80	46.40	6.10	50.40	8.60	54.60	10.40		
60.10	11.20	65.30	11.00	70.30	11.10	75.00	10.90	79.00	12.10		
89.00	11.40	97.00	11.00	107.00	10.80	115.00	10.60	124.00	10.70		
132.00	10.60	140.00	10.50	148.00	10.30	154.00	9.97	161.00	9.92		
166.00	9.96	172.00	9.82	178.00	9.73	184.00	9.64	189.00	9.56		
194.00	9.58	199.00	9.46	250.00	10.60	335.00	11.30	400.00	10.50		
600.00	10.00										

THE TOTAL ACTIVATION IS 0.4938E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1406E+04	.028467461	10794.0
2 195.00	0.1460E+04	.029574759	11143.3
3 190.00	0.1518E+04	.030748852	11513.3
4 185.00	0.1586E+04	.032116484	11906.1
5 180.00	0.1662E+04	.033650942	12323.5
6 175.00	0.1747E+04	.035381630	12768.0
7 170.00	0.1838E+04	.037217073	13242.1
8 165.00	0.1925E+04	.038980480	13748.7
9 160.00	0.2009E+04	.040681105	14291.3
10 155.00	0.2098E+04	.042482052	14873.5
11 150.00	0.2196E+04	.044477411	15499.8
12 145.00	0.2305E+04	.046688505	16175.0
13 140.00	0.2437E+04	.049360786	16904.9
14 135.00	0.2601E+04	.052686177	17696.1
15 130.00	0.2758E+04	.055849232	18556.3
16 125.00	0.2905E+04	.058841079	19494.7
17 120.00	0.3060E+04	.061963920	20521.7
18 115.00	0.3132E+04	.063442230	21650.2
19 110.00	0.2901E+04	.058750510	22895.1
20 105.00	0.2497E+04	.050578929	24274.7
21 100.00	0.2081E+04	.042152386	25811.0
22 95.00	0.1557E+04	.031524386	26475.5
23 90.00	0.1015E+04	.020563005	27194.4
24 85.00	0.5046E+03	.010220211	27975.7
25 80.00	0.1371E+03	.002776868	28829.0
26 75.00	0.3354E+02	.000679193	29765.9
27 70.00	0.7126E+01	.000144322	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0

32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.1287E+04
0.2000E+00	0.1267E+04
0.3000E+00	0.1251E+04
0.4000E+00	0.1237E+04
0.5000E+00	0.1225E+04
0.6000E+00	0.1211E+04
0.7000E+00	0.1190E+04
0.8000E+00	0.1169E+04
0.9000E+00	0.1153E+04
0.1000E+01	0.1139E+04
0.1100E+01	0.1126E+04
0.1200E+01	0.1113E+04
0.1300E+01	0.1101E+04
0.1400E+01	0.1084E+04
0.1500E+01	0.1065E+04
0.1600E+01	0.1050E+04
0.1700E+01	0.1038E+04
0.1800E+01	0.1026E+04
0.1900E+01	0.1013E+04
0.2000E+01	0.1002E+04
0.2100E+01	0.9901E+03
0.2200E+01	0.9717E+03
0.2300E+01	0.9565E+03
0.2400E+01	0.9458E+03
0.2500E+01	0.9354E+03
0.2600E+01	0.9237E+03
0.2700E+01	0.9130E+03
0.2800E+01	0.9030E+03
0.2900E+01	0.8916E+03
0.3000E+01	0.8736E+03
0.3100E+01	0.8599E+03
0.3200E+01	0.8502E+03
0.3300E+01	0.8418E+03
0.3400E+01	0.8324E+03
0.3500E+01	0.8231E+03
0.3600E+01	0.8140E+03
0.3700E+01	0.8054E+03
0.3800E+01	0.7897E+03
0.3900E+01	0.7756E+03
0.4000E+01	0.7652E+03
0.4100E+01	0.7573E+03
0.4200E+01	0.7498E+03
0.4300E+01	0.7415E+03
0.4400E+01	0.7340E+03
0.4500E+01	0.7266E+03
0.4600E+01	0.7179E+03
0.4700E+01	0.7036E+03
0.4800E+01	0.6912E+03
0.4900E+01	0.6831E+03
0.5000E+01	0.6754E+03
0.5100E+01	0.6685E+03
0.5200E+01	0.6611E+03
0.5300E+01	0.6542E+03

TOTAL OF AZ= 0.4938E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 13

REACTION	P,3P3N	PRODUCT	22-NA	Q-VALUE=	20.18 MEV
MEV	MBS	MEV	MBS	MEV	MBS
29.70	2.40	37.40	34.20	44.10	46.80
60.00	27.00	80.00	21.20	100.00	18.70
200.00	15.00	250.00	15.50	335.00	13.60

THE TOTAL ACTIVATION IS 0.1144E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.2225E+04	.019451659	10794.0
2 195.00	0.2314E+04	.020226641	11143.3
3 190.00	0.2411E+04	.021078367	11513.3
4 185.00	0.2519E+04	.022017537	11906.1
5 180.00	0.2637E+04	.023053922	12323.5
6 175.00	0.2767E+04	.024188662	12768.0
7 170.00	0.2907E+04	.025408823	13242.1
8 165.00	0.3057E+04	.026722459	13748.7
9 160.00	0.3223E+04	.028170554	14291.3
10 155.00	0.3410E+04	.029804297	14873.5
11 150.00	0.3621E+04	.031649604	15499.8
12 145.00	0.3864E+04	.033776451	16175.0
13 140.00	0.4151E+04	.036285654	16904.9
14 135.00	0.4483E+04	.039189730	17696.1
15 130.00	0.4888E+04	.042729840	18556.3
16 125.00	0.5405E+04	.047248226	19494.7
17 120.00	0.6071E+04	.053066302	20521.7
18 115.00	0.7101E+04	.062068935	21650.2
19 110.00	0.8571E+04	.074919835	22895.1
20 105.00	0.8655E+04	.075650260	24274.7
21 100.00	0.8150E+04	.071235850	25811.0
22 95.00	0.7180E+04	.062765189	26475.5
23 90.00	0.6073E+04	.053086925	27194.4
24 85.00	0.4710E+04	.041174479	27975.7
25 80.00	0.2946E+04	.025753845	28829.0
26 75.00	0.9756E+03	.008527691	29765.9
27 70.00	0.8561E+02	.000748350	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.3080E+04		
0.2000E+00	0.3045E+04		
0.3000E+00	0.2945E+04		
0.4000E+00	0.2881E+04		
0.5000E+00	0.2841E+04		
0.6000E+00	0.2817E+04		
0.7000E+00	0.2807E+04		
0.8000E+00	0.2790E+04		
0.9000E+00	0.2703E+04		
0.1000E+01	0.2637E+04		
0.1100E+01	0.2596E+04		
0.1200E+01	0.2571E+04		
0.1300E+01	0.2556E+04		
0.1400E+01	0.2550E+04		
0.1500E+01	0.2508E+04		
0.1600E+01	0.2441E+04		
0.1700E+01	0.2387E+04		
0.1800E+01	0.2352E+04		
0.1900E+01	0.2332E+04		
0.2000E+01	0.2320E+04		
0.2100E+01	0.2315E+04		
0.2200E+01	0.2280E+04		
0.2300E+01	0.2224E+04		
0.2400E+01	0.2173E+04		
0.2500E+01	0.2136E+04		
0.2600E+01	0.2114E+04		
0.2700E+01	0.2101E+04		

0.2800E+01	0.2094E+04
0.2900E+01	0.2092E+04
0.3000E+01	0.2033E+04
0.3100E+01	0.1991E+04
0.3200E+01	0.1948E+04
0.3300E+01	0.1918E+04
0.3400E+01	0.1899E+04
0.3500E+01	0.1889E+04
0.3600E+01	0.1883E+04
0.3700E+01	0.1880E+04
0.3800E+01	0.1821E+04
0.3900E+01	0.1785E+04
0.4000E+01	0.1750E+04
0.4100E+01	0.1721E+04
0.4200E+01	0.1702E+04
0.4300E+01	0.1691E+04
0.4400E+01	0.1685E+04
0.4500E+01	0.1683E+04
0.4600E+01	0.1642E+04
0.4700E+01	0.1605E+04
0.4800E+01	0.1581E+04
0.4900E+01	0.1552E+04
0.5000E+01	0.1530E+04
0.5100E+01	0.1516E+04
0.5200E+01	0.1508E+04
0.5300E+01	0.1504E+04

TOTAL OF AZ= 0.1144E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 4

REACTION P,10P8N PRODUCT 7-BE Q-VALUE= 40.00 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS
 50.00 0.30 150.00 1.00 400.00 3.40 600.00 4.90

THE TOTAL ACTIVATION IS 0.2944E+04 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1603E+03	.054463238	10794.0
2 195.00	0.1610E+03	.054700401	11143.3
3 190.00	0.1618E+03	.054976076	11513.3
4 185.00	0.1621E+03	.055072855	11906.1
5 180.00	0.1610E+03	.054684624	12323.5
6 175.00	0.1584E+03	.053800203	12768.0
7 170.00	0.1543E+03	.052406102	13242.1
8 165.00	0.1494E+03	.050743386	13748.7
9 160.00	0.1447E+03	.049157724	14291.3
10 155.00	0.1403E+03	.047646988	14873.5
11 150.00	0.1360E+03	.046206966	15499.8
12 145.00	0.1320E+03	.044828795	16175.0
13 140.00	0.1281E+03	.043501604	16904.9
14 135.00	0.1243E+03	.042222913	17696.1
15 130.00	0.1207E+03	.040989477	18556.3
16 125.00	0.1171E+03	.039796542	19494.7
17 120.00	0.1137E+03	.038634375	20521.7
18 115.00	0.1104E+03	.037498727	21650.2
19 110.00	0.1057E+03	.035913445	22895.1
20 105.00	0.9006E+02	.030595882	24274.7
21 100.00	0.7542E+02	.025622029	25811.0
22 95.00	0.5790E+02	.019670449	26475.5
23 90.00	0.4073E+02	.013838303	27194.4
24 85.00	0.2563E+02	.008708118	27975.7
25 80.00	0.1272E+02	.004320829	28829.0
26 75.00	0.0000E+00	.000000000	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5

DEPTH	GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4
0.1000E+00		0.7728E+02		
0.2000E+00		0.7655E+02		
0.3000E+00		0.7582E+02		
0.4000E+00		0.7509E+02		
0.5000E+00		0.7437E+02		
0.6000E+00		0.7365E+02		
0.7000E+00		0.7094E+02		
0.8000E+00		0.7027E+02		
0.9000E+00		0.6950E+02		
0.1000E+01		0.6894E+02		
0.1100E+01		0.6828E+02		
0.1200E+01		0.6762E+02		
0.1300E+01		0.6506E+02		
0.1400E+01		0.6445E+02		
0.1500E+01		0.6383E+02		
0.1600E+01		0.6321E+02		
0.1700E+01		0.6260E+02		
0.1800E+01		0.6200E+02		
0.1900E+01		0.6139E+02		
0.2000E+01		0.5898E+02		
0.2100E+01		0.5842E+02		
0.2200E+01		0.5786E+02		
0.2300E+01		0.5730E+02		
0.2400E+01		0.5675E+02		
0.2500E+01		0.5620E+02		
0.2600E+01		0.5566E+02		
0.2700E+01		0.5512E+02		
0.2800E+01		0.5287E+02		
0.2900E+01		0.5236E+02		
0.3000E+01		0.5185E+02		
0.3100E+01		0.5134E+02		
0.3200E+01		0.5084E+02		
0.3300E+01		0.5034E+02		
0.3400E+01		0.4985E+02		
0.3500E+01		0.4935E+02		
0.3600E+01		0.4726E+02		
0.3700E+01		0.4680E+02		
0.3800E+01		0.4634E+02		
0.3900E+01		0.4589E+02		
0.4000E+01		0.4545E+02		
0.4100E+01		0.4500E+02		
0.4200E+01		0.4455E+02		
0.4300E+01		0.4410E+02		
0.4400E+01		0.4218E+02		
0.4500E+01		0.4177E+02		
0.4600E+01		0.4135E+02		
0.4700E+01		0.4095E+02		
0.4800E+01		0.4054E+02		
0.4900E+01		0.4013E+02		
0.5000E+01		0.3973E+02		
0.5100E+01		0.3933E+02		
0.5200E+01		0.3894E+02		
0.5300E+01		0.3721E+02		

TOTAL OF AZ= 0.2944E+04
 PHYLAIRD job terminated at 29-MAY-1991 11:37:20.63

Accounting information:
 Buffered I/O count: 76 Peak working set size: 422
 Direct I/O count: 106 Peak page file size: 2527
 Page faults: 748 Mounted volumes: 0
 Charged CPU time: 0 00:00:01.79 Elapsed time: 0 00:00:10.35

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PALD

THE TARGET IS AL
 TM,C,AND A ARE 26.980 184.000 5.200
 NCM= 10 NQM= 2 NMC= 3
 THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.200
 THICKNESS OF COVERING MATERIAL 5.00
 THE INELASTIC SECTIONS FOR COVERING
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
 60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
 THE INELASTIC SECTIONS OF THE TARGET
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
 50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
 TARGET THICKNESS 5.271 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 89.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 3
 THE NUMBER OF REACTIONS EQUAL 3
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15
 MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
 1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
 3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
 30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
 THE NUMBER OF CROSS SECTION DATA POINTS IS 31
 REACTION P,3PN PRODUCT 24-NA Q-VALUE= 23.71 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 37.40 0.80 44.10 2.80 46.40 6.10 50.40 8.60 54.60 10.40
 60.10 11.20 65.30 11.00 70.30 11.10 75.00 10.90 79.00 12.10
 89.00 11.40 97.00 11.00 107.00 10.80 115.00 10.60 124.00 10.70
 132.00 10.60 140.00 10.50 148.00 10.30 154.00 9.97 161.00 9.92
 166.00 9.96 172.00 9.82 178.00 9.73 184.00 9.64 189.00 9.56
 194.00 9.58 199.00 9.46 250.00 10.60 335.00 11.30 400.00 10.50
 600.00 10.00

THE TOTAL ACTIVATION IS 0.5016E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.2011E+04	.040091969	10794.0
2 195.00	0.2092E+04	.041696440	11143.3
3 190.00	0.2168E+04	.043215159	11513.3
4 185.00	0.2239E+04	.044634178	11906.1
5 180.00	0.2315E+04	.046145823	12323.5
6 175.00	0.2398E+04	.047801994	12768.0
7 170.00	0.2486E+04	.049547438	13242.1
8 165.00	0.2569E+04	.051214192	13748.7
9 160.00	0.2650E+04	.052831437	14291.3
10 155.00	0.2201E+04	.043868031	14873.5
11 150.00	0.2295E+04	.045747772	15499.8
12 145.00	0.2374E+04	.047320779	16175.0
13 140.00	0.2462E+04	.049070500	16904.9
14 135.00	0.2555E+04	.050929967	17696.1
15 130.00	0.2613E+04	.052086994	18556.3
16 125.00	0.2644E+04	.052697923	19494.7
17 120.00	0.2626E+04	.052349530	20521.7
18 115.00	0.2515E+04	.050130140	21650.2
19 110.00	0.1941E+04	.038701504	22895.1
20 105.00	0.1665E+04	.033197016	24274.7
21 100.00	0.1388E+04	.027659377	25811.0
22 95.00	0.1038E+04	.020685537	26475.5
23 90.00	0.5641E+03	.011244121	27194.4
24 85.00	0.2803E+03	.005588544	27975.7
25 80.00	0.6094E+02	.001214742	28829.0
26 75.00	0.1490E+02	.000297114	29765.9
27 70.00	0.1584E+01	.000031567	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0

32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
-------	-------------	------------	------------

0.1000E+00	0.1143E+04
0.2000E+00	0.1252E+04
0.3000E+00	0.1495E+04
0.4000E+00	0.1108E+04
0.5000E+00	0.1335E+04
0.6000E+00	0.1465E+04
0.7000E+00	0.1299E+04
0.8000E+00	0.1177E+04
0.9000E+00	0.1267E+04
0.1000E+01	0.1140E+04
0.1100E+01	0.1448E+04
0.1200E+01	0.1027E+04
0.1300E+01	0.1328E+04
0.1400E+01	0.1181E+04
0.1500E+01	0.1058E+04
0.1600E+01	0.1269E+04
0.1700E+01	0.1027E+04
0.1800E+01	0.1219E+04
0.1900E+01	0.9948E+03
0.2000E+01	0.9639E+03
0.2100E+01	0.1196E+04
0.2200E+01	0.1019E+04
0.2300E+01	0.9542E+03
0.2400E+01	0.9908E+03
0.2500E+01	0.9245E+03
0.2600E+01	0.1171E+04
0.2700E+01	0.9522E+03
0.2800E+01	0.7719E+03
0.2900E+01	0.9780E+03
0.3000E+01	0.8408E+03
0.3100E+01	0.9419E+03
0.3200E+01	0.8289E+03
0.3300E+01	0.8255E+03
0.3400E+01	0.8572E+03
0.3500E+01	0.7875E+03
0.3600E+01	0.7517E+03
0.3700E+01	0.7912E+03
0.3800E+01	0.7351E+03
0.3900E+01	0.7846E+03
0.4000E+01	0.7009E+03
0.4100E+01	0.6561E+03
0.4200E+01	0.8132E+03
0.4300E+01	0.5718E+03
0.4400E+01	0.7041E+03
0.4500E+01	0.5980E+03
0.4600E+01	0.6123E+03
0.4700E+01	0.6459E+03
0.4800E+01	0.5881E+03
0.4900E+01	0.5975E+03
0.5000E+01	0.5303E+03
0.5100E+01	0.5702E+03
0.5200E+01	0.6309E+03
0.5300E+01	0.5193E+03

TOTAL OF AZ= 0.5004E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 13

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	20.18 MEV
29.70	2.40	37.40	34.20	44.10	46.80	45.00	46.00	50.00	36.50		
60.00	27.00	80.00	21.20	100.00	18.70	120.00	17.30	160.00	15.80		
200.00	15.00	250.00	15.50	335.00	13.60						

THE TOTAL ACTIVATION IS 0.1095E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.3218E+04	.023393215	10794.0
2 195.00	0.3370E+04	.030785965	11143.3
3 190.00	0.3561E+04	.032526322	11513.3
4 185.00	0.3709E+04	.033881899	11906.1
5 180.00	0.3849E+04	.035160311	12323.5
6 175.00	0.4001E+04	.036552630	12768.0
7 170.00	0.4166E+04	.038056210	13242.1
8 165.00	0.4346E+04	.039703399	13748.7
9 160.00	0.4550E+04	.041568115	14291.3
10 155.00	0.3684E+04	.0336552686	14873.5
11 150.00	0.3982E+04	.036374588	15499.8
12 145.00	0.4277E+04	.039071161	16175.0
13 140.00	0.4535E+04	.041430455	16904.9
14 135.00	0.4859E+04	.044383068	17696.1
15 130.00	0.5279E+04	.048225775	18556.3
16 125.00	0.5663E+04	.051734921	19494.7
17 120.00	0.6126E+04	.055962104	20521.7
18 115.00	0.6608E+04	.060361579	21650.2
19 110.00	0.5940E+04	.054257829	22895.1
20 105.00	0.5773E+04	.052734949	24274.7
21 100.00	0.5433E+04	.049630411	25811.0
22 95.00	0.4787E+04	.043728855	26475.5
23 90.00	0.3374E+04	.030821621	27194.4
24 85.00	0.2617E+04	.023905393	27975.7
25 80.00	0.1309E+04	.011961896	28829.0
26 75.00	0.4336E+03	.003960859	29765.9
27 70.00	0.1903E+02	.000173793	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.2345E+04		
0.2000E+00	0.2544E+04		
0.3000E+00	0.2966E+04		
0.4000E+00	0.2258E+04		
0.5000E+00	0.2647E+04		
0.6000E+00	0.3038E+04		
0.7000E+00	0.2632E+04		
0.8000E+00	0.2487E+04		
0.9000E+00	0.2576E+04		
0.1000E+01	0.2362E+04		
0.1100E+01	0.3051E+04		
0.1200E+01	0.2152E+04		
0.1300E+01	0.2864E+04		
0.1400E+01	0.2487E+04		
0.1500E+01	0.2274E+04		
0.1600E+01	0.2712E+04		
0.1700E+01	0.2216E+04		
0.1800E+01	0.2605E+04		
0.1900E+01	0.2150E+04		
0.2000E+01	0.2064E+04		
0.2100E+01	0.2633E+04		
0.2200E+01	0.2235E+04		
0.2300E+01	0.2094E+04		
0.2400E+01	0.2194E+04		
0.2500E+01	0.2037E+04		
0.2600E+01	0.2641E+04		
0.2700E+01	0.2118E+04		

0.2800E+01	0.1722E+04
0.2900E+01	0.2199E+04
0.3000E+01	0.1876E+04
0.3100E+01	0.2117E+04
0.3200E+01	0.1858E+04
0.3300E+01	0.1865E+04
0.3400E+01	0.1948E+04
0.3500E+01	0.1814E+04
0.3600E+01	0.1744E+04
0.3700E+01	0.1827E+04
0.3800E+01	0.1705E+04
0.3900E+01	0.1818E+04
0.4000E+01	0.1611E+04
0.4100E+01	0.1525E+04
0.4200E+01	0.1880E+04

IEV

PROTON
FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5

38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.7768E+02		
0.2000E+00		0.8429E+02		
0.3000E+00		0.1007E+03		
0.4000E+00		0.7413E+02		
0.5000E+00		0.8952E+02		
0.6000E+00		0.9471E+02		
0.7000E+00		0.8542E+02		
0.8000E+00		0.7606E+02		
0.9000E+00		0.8251E+02		
0.1000E+01		0.7276E+02		
0.1100E+01		0.9123E+02		
0.1200E+01		0.6598E+02		
0.1300E+01		0.8240E+02		
0.1400E+01		0.7432E+02		
0.1500E+01		0.6568E+02		
0.1600E+01		0.7862E+02		
0.1700E+01		0.6283E+02		
0.1800E+01		0.7448E+02		
0.1900E+01		0.6039E+02		
0.2000E+01		0.5781E+02		
0.2100E+01		0.7142E+02		
0.2200E+01		0.6047E+02		
0.2300E+01		0.5691E+02		
0.2400E+01		0.5874E+02		
0.2500E+01		0.5468E+02		
0.2600E+01		0.6858E+02		
0.2700E+01		0.5513E+02		
0.2800E+01		0.4458E+02		
0.2900E+01		0.5656E+02		
0.3000E+01		0.4826E+02		
0.3100E+01		0.5378E+02		
0.3200E+01		0.4697E+02		
0.3300E+01		0.4684E+02		
0.3400E+01		0.4834E+02		
0.3500E+01		0.4471E+02		
0.3600E+01		0.4216E+02		
0.3700E+01		0.4451E+02		
0.3800E+01		0.4108E+02		
0.3900E+01		0.4398E+02		
0.4000E+01		0.3927E+02		
0.4100E+01		0.3667E+02		
0.4200E+01		0.4536E+02		
0.4300E+01		0.3172E+02		
0.4400E+01		0.3924E+02		
0.4500E+01		0.3280E+02		
0.4600E+01		0.3357E+02		
0.4700E+01		0.3587E+02		
0.4800E+01		0.3221E+02		
0.4900E+01		0.3333E+02		
0.5000E+01		0.2944E+02		
0.5100E+01		0.3143E+02		
0.5200E+01		0.3489E+02		
0.5300E+01		0.2815E+02		

TOTAL OF AZ= 0.3023E+04

PHYLAIRD job terminated at 29-MAY-1991 11:28:53.83

Accounting information:

Buffered I/O count:

Direct I/O count:

Page faults:

Charged CPU time:

76

91

712

0 00:00:12.08

Peak working set size: 480

Peak page file size: 2527

Mounted volumes: 0

Elapsed time: 0 00:00:45.02

ENTER THE NAME OF THE DATA FILE BEING USED
PALD

THE TARGET IS AL
TM, C, AND A ARE 26.980 184.000 5.200
NCM= 10 NQM= 2 NMC= 2
THE COVERING MATERIAL IS ALUM
TC, CC, AND AC ARE 27.000 184.000 5.200
THICKNESS OF COVERING MATERIAL 0.00
THE INELASTIC XSECTIONS FOR COVERING
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
NO COVERING MATERIAL
THE INELASTIC XSECTIONS OF THE TARGET
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
20.00 1611.00 25.00 1617.00 30.00 1649.00 35.00 1703.00 40.00 1740.00
50.00 1748.00 60.00 1776.00 100.00 1662.00 225.00 1600.00 340.00 1626.00
TARGET THICKNESS 5.271 CM/CM**2 WIDTH 5.080 CM LENGTH 5.080 CM
INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
200.00 5.00 5.00 0.100 3
THE NUMBER OF REACTIONS EQUAL 3
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 31
REACTION P, 3PN PRODUCT 24-NA Q-VALUE= 23.71 MEV
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
37.40 0.80 44.10 2.80 46.40 6.10 50.40 8.60 54.60 10.40
60.10 11.20 65.30 11.00 70.30 11.10 75.00 10.90 79.00 12.10
89.00 11.40 97.00 11.00 107.00 10.80 115.00 10.60 124.00 10.70
132.00 10.60 140.00 10.50 148.00 10.30 154.00 9.97 161.00 9.92
166.00 9.96 172.00 9.82 178.00 9.73 184.00 9.64 189.00 9.56
194.00 9.58 199.00 9.46 250.00 10.60 335.00 11.30 400.00 10.50
600.00 10.00

THE TOTAL ACTIVATION IS 0.7702E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1435E+04	0.018632354	10794.0
2 195.00	0.1491E+04	0.019353749	11143.3
3 190.00	0.1550E+04	0.020121515	11513.3
4 185.00	0.1617E+04	0.020990394	11906.1
5 180.00	0.1685E+04	0.021878377	12323.5
6 175.00	0.1755E+04	0.022791181	12768.0
7 170.00	0.1834E+04	0.023815149	13242.1
8 165.00	0.1923E+04	0.024971429	13748.7
9 160.00	0.2024E+04	0.026281737	14291.3
10 155.00	0.2136E+04	0.027734764	14873.5
11 150.00	0.2255E+04	0.029272338	15499.8
12 145.00	0.2371E+04	0.030790193	16175.0
13 140.00	0.2488E+04	0.032304641	16904.9
14 135.00	0.2612E+04	0.033918731	17696.1
15 130.00	0.2751E+04	0.035714943	18556.3
16 125.00	0.2904E+04	0.037703894	19494.7
17 120.00	0.3081E+04	0.040000711	20521.7
18 115.00	0.3296E+04	0.042789400	21650.2
19 110.00	0.3551E+04	0.046102121	22895.1
20 105.00	0.3784E+04	0.049128212	24274.7
21 100.00	0.4033E+04	0.052364286	25811.0
22 95.00	0.4140E+04	0.053753134	26475.5
23 90.00	0.4176E+04	0.054225285	27194.4
24 85.00	0.3948E+04	0.051257007	27975.7
25 80.00	0.3487E+04	0.045274172	28829.0
26 75.00	0.2990E+04	0.038819924	29765.9
27 70.00	0.2507E+04	0.032549269	30801.2
28 65.00	0.2006E+04	0.026045009	31953.4
29 60.00	0.1485E+04	0.019275753	33246.3
30 55.00	0.9597E+03	0.012460847	34711.2
31 50.00	0.4926E+03	0.006396213	36390.0
32 45.00	0.1647E+03	0.002137881	37815.7
33 40.00	0.5984E+02	0.000776954	39475.7

34	35.00	0.2070E+02	.000268758	41445.9
35	30.00	0.6752E+01	.000087669	43843.0
36	25.00	0.9235E+00	.000011991	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.2036E+04
0.2000E+00	0.2006E+04
0.3000E+00	0.1979E+04
0.4000E+00	0.1954E+04
0.5000E+00	0.1919E+04
0.6000E+00	0.1887E+04
0.7000E+00	0.1860E+04
0.8000E+00	0.1836E+04
0.9000E+00	0.1814E+04
0.1000E+01	0.1786E+04
0.1100E+01	0.1756E+04
0.1200E+01	0.1731E+04
0.1300E+01	0.1710E+04
0.1400E+01	0.1687E+04
0.1500E+01	0.1667E+04
0.1600E+01	0.1639E+04
0.1700E+01	0.1615E+04
0.1800E+01	0.1594E+04
0.1900E+01	0.1575E+04
0.2000E+01	0.1556E+04
0.2100E+01	0.1537E+04
0.2200E+01	0.1511E+04
0.2300E+01	0.1487E+04
0.2400E+01	0.1469E+04
0.2500E+01	0.1454E+04
0.2600E+01	0.1438E+04
0.2700E+01	0.1421E+04
0.2800E+01	0.1399E+04
0.2900E+01	0.1375E+04
0.3000E+01	0.1356E+04
0.3100E+01	0.1340E+04
0.3200E+01	0.1326E+04
0.3300E+01	0.1314E+04
0.3400E+01	0.1300E+04
0.3500E+01	0.1278E+04
0.3600E+01	0.1257E+04
0.3700E+01	0.1240E+04
0.3800E+01	0.1226E+04
0.3900E+01	0.1212E+04
0.4000E+01	0.1199E+04
0.4100E+01	0.1187E+04
0.4200E+01	0.1171E+04
0.4300E+01	0.1151E+04
0.4400E+01	0.1135E+04
0.4500E+01	0.1123E+04
0.4600E+01	0.1110E+04
0.4700E+01	0.1097E+04
0.4800E+01	0.1085E+04
0.4900E+01	0.1074E+04
0.5000E+01	0.1055E+04
0.5100E+01	0.1039E+04
0.5200E+01	0.1028E+04
0.5300E+01	0.1016E+04

TOTAL OF AZ= 0.7702E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 13

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
29.70	2.40	37.40	34.20	44.10	46.80	45.00	46.00	50.00	36.50		
60.00	27.00	80.00	21.20	100.00	18.70	120.00	17.30	160.00	15.80		
200.00	15.00	250.00	15.50	335.00	13.60						

THE TOTAL ACTIVATION IS 0.1801E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION
MEV	NUCLEI PER DAY	
1 200.00	0.2276E+04	.012635327

PROTON FLUX
PROTONS/DAY*CM**2
10794.0

2	195.00	0.2365E+04	.013130350	11143.3
3	190.00	0.2460E+04	.013656225	11513.3
4	185.00	0.2561E+04	.014215724	11906.1
5	180.00	0.2668E+04	.014812097	12323.5
6	175.00	0.2785E+04	.015460659	12768.0
7	170.00	0.2914E+04	.016174559	13242.1
8	165.00	0.3055E+04	.016961174	13748.7
9	160.00	0.3212E+04	.017828975	14291.3
10	155.00	0.3382E+04	.018776227	14873.5
11	150.00	0.3567E+04	.019800583	15499.8
12	145.00	0.3767E+04	.020911053	16175.0
13	140.00	0.3988E+04	.022138255	16904.9
14	135.00	0.4237E+04	.023520200	17696.1
15	130.00	0.4518E+04	.025079163	18556.3
16	125.00	0.4837E+04	.026852533	19494.7
17	120.00	0.5210E+04	.028924970	20521.7
18	115.00	0.5644E+04	.031331204	21650.2
19	110.00	0.6146E+04	.034120526	22895.1
20	105.00	0.6763E+04	.037546404	24274.7
21	100.00	0.7532E+04	.041812923	25811.0
22	95.00	0.8170E+04	.045357641	26475.5
23	90.00	0.9119E+04	.050624389	27194.4
24	85.00	0.1060E+05	.058820367	27975.7
25	80.00	0.1132E+05	.062836692	28829.0
26	75.00	0.1075E+05	.059701018	29765.9
27	70.00	0.1002E+05	.055619713	30801.2
28	65.00	0.9178E+04	.050948273	31953.4
29	60.00	0.8239E+04	.045740232	33246.3
30	55.00	0.7113E+04	.039489605	34711.2
31	50.00	0.5706E+04	.031678613	36390.0
32	45.00	0.3810E+04	.021148250	37815.7
33	40.00	0.1776E+04	.009860973	39475.7
34	35.00	0.3765E+03	.002090025	41445.9
35	30.00	0.6211E+02	.000344776	43843.0
36	25.00	0.9064E+01	.000050318	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.5022E+04		
0.2000E+00		0.4950E+04		
0.3000E+00		0.4854E+04		
0.4000E+00		0.4717E+04		
0.5000E+00		0.4633E+04		
0.6000E+00		0.4579E+04		
0.7000E+00		0.4526E+04		
0.8000E+00		0.4402E+04		
0.9000E+00		0.4300E+04		
0.1000E+01		0.4237E+04		
0.1100E+01		0.4199E+04		
0.1200E+01		0.4163E+04		
0.1300E+01		0.4043E+04		
0.1400E+01		0.3949E+04		
0.1500E+01		0.3890E+04		
0.1600E+01		0.3857E+04		
0.1700E+01		0.3836E+04		
0.1800E+01		0.3759E+04		
0.1900E+01		0.3654E+04		
0.2000E+01		0.3587E+04		
0.2100E+01		0.3548E+04		
0.2200E+01		0.3528E+04		
0.2300E+01		0.3516E+04		
0.2400E+01		0.3423E+04		
0.2500E+01		0.3336E+04		
0.2600E+01		0.3281E+04		
0.2700E+01		0.3247E+04		
0.2800E+01		0.3231E+04		
0.2900E+01		0.3225E+04		
0.3000E+01		0.3155E+04		
0.3100E+01		0.3068E+04		
0.3200E+01		0.3014E+04		
0.3300E+01		0.2979E+04		

0.3400E+01	0.2959E+04
0.3500E+01	0.2951E+04
0.3600E+01	0.2929E+04
0.3700E+01	0.2847E+04
0.3800E+01	0.2781E+04
0.3900E+01	0.2741E+04
0.4000E+01	0.2716E+04
0.4100E+01	0.2702E+04
0.4200E+01	0.2695E+04
0.4300E+01	0.2660E+04
0.4400E+01	0.2593E+04
0.4500E+01	0.2536E+04
0.4600E+01	0.2500E+04
0.4700E+01	0.2478E+04
0.4800E+01	0.2465E+04
0.4900E+01	0.2459E+04
0.5000E+01	0.2433E+04
0.5100E+01	0.2375E+04
0.5200E+01	0.2322E+04
0.5300E+01	0.2284E+04
TOTAL OF AZ= 0.1801E+06	
THE NUMBER OF CROSS SECTION DATA POINTS IS 4	
REACTION P,10P8N PRODUCT 7-BE Q-VALUE= 40.00 MEV	
MEV MBS	MEV MBS
50.00 0.30 150.00	1.00 400.00 3.40 600.00 4.90
THE TOTAL ACTIVATION IS 0.4779E+04 NUCLEI /DAY	
PROTON ENERGY	PARTIAL ACTIVATION
MEV	NUCLEI PER DAY
1 200.00	0.1833E+03
2 195.00	0.1844E+03
3 190.00	0.1858E+03
4 185.00	0.1872E+03
5 180.00	0.1889E+03
6 175.00	0.1907E+03
7 170.00	0.1927E+03
8 165.00	0.1937E+03
9 160.00	0.1932E+03
10 155.00	0.1914E+03
11 150.00	0.1880E+03
12 145.00	0.1840E+03
13 140.00	0.1803E+03
14 135.00	0.1769E+03
15 130.00	0.1739E+03
16 125.00	0.1711E+03
17 120.00	0.1686E+03
18 115.00	0.1664E+03
19 110.00	0.1645E+03
20 105.00	0.1630E+03
21 100.00	0.1617E+03
22 95.00	0.1547E+03
23 90.00	0.1480E+03
24 85.00	0.1416E+03
25 80.00	0.1251E+03
26 75.00	0.1071E+03
27 70.00	0.9147E+02
28 65.00	0.7387E+02
29 60.00	0.5835E+02
30 55.00	0.4261E+02
31 50.00	0.2902E+02
32 45.00	0.1475E+02
33 40.00	0.2997E+01
34 35.00	0.0000E+00
35 30.00	0.0000E+00
36 25.00	0.0000E+00
37 20.00	0.0000E+00
38 15.00	0.0000E+00
39 10.00	0.0000E+00
40 5.00	0.0000E+00
DEPTH	ACTIVATION
GRAMS/SQ CM	NUCLEI/DAY
0.1000E+00	0.1279E+03
0.2000E+00	0.1238E+03
0.3000E+00	0.1226E+03
FRACTIONAL ACTIVATION	
PROTON FLUX	
PROTONS/DAY*CM**2	
0.38346998	10794.0
0.38590711	11143.3
0.38866397	11513.3
0.39176330	11906.1
0.39522942	12323.5
0.39909098	12768.0
0.40321406	13242.1
0.40523067	13748.7
0.40430911	14291.3
0.40037039	14873.5
0.39331309	15499.8
0.38498007	16175.0
0.37728872	16904.9
0.37023582	17696.1
0.36382262	18556.3
0.35804003	19494.7
0.35284009	20521.7
0.34823976	21650.2
0.34426909	22895.1
0.34096107	24274.7
0.33835188	25811.0
0.3358464	26475.5
0.30961668	27194.4
0.29633308	27975.7
0.26168406	28829.0
0.22416692	29765.9
0.19137919	30801.2
0.15455200	31953.4
0.12208242	33246.3
0.08914912	34711.2
0.06072791	36390.0
0.03086060	37815.7
0.00627089	39475.7
0.00000000	41445.9
0.00000000	43843.0
0.00000000	47588.0
0.00000000	52609.5
0.00000000	59873.0
0.00000000	86539.0
0.00000000	111493.4

0.4000E+00	0.1215E+03
0.5000E+00	0.1203E+03
0.6000E+00	0.1164E+03
0.7000E+00	0.1153E+03
0.8000E+00	0.1143E+03
0.9000E+00	0.1132E+03
0.1000E+01	0.1121E+03
0.1100E+01	0.1084E+03
0.1200E+01	0.1074E+03
0.1300E+01	0.1064E+03
0.1400E+01	0.1055E+03
0.1500E+01	0.1045E+03
0.1600E+01	0.1010E+03
0.1700E+01	0.1001E+03
0.1800E+01	0.9914E+02
0.1900E+01	0.9822E+02
0.2000E+01	0.9730E+02
0.2100E+01	0.9639E+02
0.2200E+01	0.9318E+02
0.2300E+01	0.9232E+02
0.2400E+01	0.9147E+02
0.2500E+01	0.9062E+02
0.2600E+01	0.8977E+02
0.2700E+01	0.8892E+02
0.2800E+01	0.8591E+02
0.2900E+01	0.8512E+02
0.3000E+01	0.8433E+02
0.3100E+01	0.8354E+02
0.3200E+01	0.8276E+02
0.3300E+01	0.8199E+02
0.3400E+01	0.8122E+02
0.3500E+01	0.7843E+02
0.3600E+01	0.7770E+02
0.3700E+01	0.7698E+02
0.3800E+01	0.7626E+02
0.3900E+01	0.7554E+02
0.4000E+01	0.7482E+02
0.4100E+01	0.7218E+02
0.4200E+01	0.7151E+02
0.4300E+01	0.7084E+02
0.4400E+01	0.7018E+02
0.4500E+01	0.6952E+02
0.4600E+01	0.6887E+02
0.4700E+01	0.6822E+02
0.4800E+01	0.6575E+02
0.4900E+01	0.6514E+02
0.5000E+01	0.6453E+02
0.5100E+01	0.6392E+02
0.5200E+01	0.6331E+02
0.5300E+01	0.6271E+02

TOTAL OF AZ= 0.4779E+04
 PHYLAIRD job terminated at 2-JUL-1991 21:09:10.68

Accounting information:

Buffered I/O count:	75	Peak working set size:	462
Direct I/O count:	94	Peak page file size:	2575
Page faults:	732	Mounted volumes:	0
Charged CPU time:	0 00:00:01.76	Elapsed time:	0 00:00:06.00

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PALD

```

    THE TARGET IS      AL
    TM,C,AND A ARE    26.980  184.000  5.200
    NCM= 10  NQM= 2  NMC= 3
    THE COVERING MATERIAL IS ALUM
    TC,CC,AND AC ARE  27.000  184.000  5.200
    THICKNESS OF COVERING MATERIAL  0.00
    THE INELASTIC XSECTIONS FOR COVERING
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
    60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
    THE INELASTIC XSECTIONS OF THE TARGET
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
    50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
    TARGET THICKNESS  5.271 CM/CM**2  WIDTH  5.080CM  LENGTH  5.080 CM
    INITIAL THETA  0.0  FINAL THETA  89.0  INCREMENT  11.0
    INITIAL PHI  0.0  FINAL PHI  0.0  INCREMENT  1.0
    200.00  5.00  5.00  0.100  3
    THE NUMBER OF REACTIONS EQUAL  3
    THE NUMBER OF PROTON FLUX DATA POINTS IS 15
    MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
    1.0  211010.0  1.5  129570.0  2.0  120000.0  2.5  120000.0  3.0  113220.0
    3.7  113180.0  4.5  113430.0  6.0  108220.0  10.0  86539.0  15.0  59873.0
    30.0  43843.0  50.0  36390.0  100.0  25811.0  200.0  10794.0  300.0  4017.6
    THE NUMBER OF CROSS SECTION DATA POINTS IS 31
    REACTION  P,3PN  PRODUCT  24-NA  Q-VALUE=  23.71 MEV
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    37.40  0.80  44.10  2.80  46.40  6.10  50.40  8.60  54.60  10.40
    60.10  11.20  65.30  11.00  70.30  11.10  75.00  10.90  79.00  12.10
    89.00  11.40  97.00  11.00  107.00  10.80  115.00  10.60  124.00  10.70
    132.00  10.60  140.00  10.50  148.00  10.30  154.00  9.97  161.00  9.92
    166.00  9.96  172.00  9.82  178.00  9.73  184.00  9.64  189.00  9.56
    194.00  9.58  199.00  9.46  250.00  10.60  335.00  11.30  400.00  10.50
    600.00  10.00
    THE TOTAL ACTIVATION IS  0.6738E+05 NUCLEI /DAY
    PROTON  PARTIAL  FRACTIONAL  PROTON
    ENERGY  ACTIVATION  ACTIVATION  FLUX
    MEV  NUCLEI PER DAY
    1  200.00  0.2578E+04  .038260836  10794.0
    2  195.00  0.2660E+04  .039478458  11143.3
    3  190.00  0.2737E+04  .040618174  11513.3
    4  185.00  0.2807E+04  .041666415  11906.1
    5  180.00  0.2882E+04  .042768534  12323.5
    6  175.00  0.2962E+04  .043965798  12768.0
    7  170.00  0.3046E+04  .045209303  13242.1
    8  165.00  0.3123E+04  .046357695  13748.7
    9  160.00  0.3196E+04  .047438525  14291.3
    10  155.00  0.3272E+04  .048561670  14873.5
    11  150.00  0.3342E+04  .049595471  15499.8
    12  145.00  0.3391E+04  .050335195  16175.0
    13  140.00  0.3446E+04  .051149841  16904.9
    14  135.00  0.3503E+04  .051986035  17696.1
    15  130.00  0.3518E+04  .052208256  18556.3
    16  125.00  0.3498E+04  .051922031  19494.7
    17  120.00  0.3423E+04  .050805051  20521.7
    18  115.00  0.3244E+04  .048144493  21650.2
    19  110.00  0.2914E+04  .043253228  22895.1
    20  105.00  0.2498E+04  .037076294  24274.7
    21  100.00  0.2081E+04  .030890726  25811.0
    22  95.00  0.1557E+04  .023102172  26475.5
    23  90.00  0.1015E+04  .015069276  27194.4
    24  85.00  0.5046E+03  .007489718  27975.7
    25  80.00  0.1371E+03  .002034995  28829.0
    26  75.00  0.3354E+02  .000497736  29765.9
    27  70.00  0.7126E+01  .000105764  30801.2
    28  65.00  0.5573E+00  .000008272  31953.4
    29  60.00  0.0000E+00  .000000000  33246.3
    30  55.00  0.0000E+00  .000000000  34711.2
    31  50.00  0.0000E+00  .000000000  36390.0
  
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32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLBI/DAY
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0.1000E+00	0.5068E+04
0.2000E+00	0.4196E+04
0.3000E+00	0.3755E+04
0.4000E+00	0.2723E+04
0.5000E+00	0.2671E+04
0.6000E+00	0.2359E+04
0.7000E+00	0.2076E+04
0.8000E+00	0.1664E+04
0.9000E+00	0.1701E+04
0.1000E+01	0.1405E+04
0.1100E+01	0.1710E+04
0.1200E+01	0.1290E+04
0.1300E+01	0.1528E+04
0.1400E+01	0.1412E+04
0.1500E+01	0.1221E+04
0.1600E+01	0.1455E+04
0.1700E+01	0.1156E+04
0.1800E+01	0.1365E+04
0.1900E+01	0.1097E+04
0.2000E+01	0.1054E+04
0.2100E+01	0.1294E+04
0.2200E+01	0.1088E+04
0.2300E+01	0.1029E+04
0.2400E+01	0.1042E+04
0.2500E+01	0.9782E+03
0.2600E+01	0.1209E+04
0.2700E+01	0.9900E+03
0.2800E+01	0.7966E+03
0.2900E+01	0.9984E+03
0.3000E+01	0.8583E+03
0.3100E+01	0.9518E+03
0.3200E+01	0.8356E+03
0.3300E+01	0.8272E+03
0.3400E+01	0.8580E+03
0.3500E+01	0.7877E+03
0.3600E+01	0.7517E+03
0.3700E+01	0.7912E+03
0.3800E+01	0.7351E+03
0.3900E+01	0.7846E+03
0.4000E+01	0.7009E+03
0.4100E+01	0.6561E+03
0.4200E+01	0.8132E+03
0.4300E+01	0.5718E+03
0.4400E+01	0.7041E+03
0.4500E+01	0.5980E+03
0.4600E+01	0.6123E+03
0.4700E+01	0.6459E+03
0.4800E+01	0.5881E+03
0.4900E+01	0.5975E+03
0.5000E+01	0.5303E+03
0.5100E+01	0.5702E+03
0.5200E+01	0.6309E+03
0.5300E+01	0.5193E+03

TOTAL OF AZ= 0.6725E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 13

REACTION	P,3P3N	PRODUCT	22-NA	Q-VALUE=	20.18 MEV
MEV	MBS	MEV	MBS	MEV	MBS
29.70	2.40	37.40	34.20	44.10	46.80
60.00	27.00	80.00	21.20	100.00	18.70
200.00	15.00	250.00	15.50	335.00	13.60

THE TOTAL ACTIVATION IS 0.1567E+06 NUCLBI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.4233E+04	.027014315	10794.0
2 195.00	0.4398E+04	.028070524	11143.3
3 190.00	0.4601E+04	.029366089	11513.3
4 185.00	0.4761E+04	.030389054	11906.1
5 180.00	0.4913E+04	.031355627	12323.5
6 175.00	0.5076E+04	.032396764	12768.0
7 170.00	0.5250E+04	.033506066	13242.1
8 165.00	0.5438E+04	.034707457	13748.7
9 160.00	0.5649E+04	.036052082	14291.3
10 155.00	0.5890E+04	.037593827	14873.5
11 150.00	0.6195E+04	.039537352	15499.8
12 145.00	0.6492E+04	.041433111	16175.0
13 140.00	0.6748E+04	.043066408	16904.9
14 135.00	0.7062E+04	.045073196	17696.1
15 130.00	0.7467E+04	.047655046	18556.3
16 125.00	0.7827E+04	.049951393	19494.7
17 120.00	0.8253E+04	.052673802	20521.7
18 115.00	0.8686E+04	.055437967	21650.2
19 110.00	0.8958E+04	.057172205	22895.1
20 105.00	0.8660E+04	.055270117	24274.7
21 100.00	0.8150E+04	.052013110	25811.0
22 95.00	0.7180E+04	.045828220	26475.5
23 90.00	0.6073E+04	.038761612	27194.4
24 85.00	0.4710E+04	.030063670	27975.7
25 80.00	0.2946E+04	.018804265	28829.0
26 75.00	0.9756E+03	.006226521	29765.9
27 70.00	0.8561E+02	.000546410	30801.2
28 65.00	0.5293E+01	.000033782	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.1191E+05		
0.2000E+00	0.9767E+04		
0.3000E+00	0.8671E+04		
0.4000E+00	0.6317E+04		
0.5000E+00	0.6242E+04		
0.6000E+00	0.5582E+04		
0.7000E+00	0.4966E+04		
0.8000E+00	0.4016E+04		
0.9000E+00	0.4102E+04		
0.1000E+01	0.3281E+04		
0.1100E+01	0.3947E+04		
0.1200E+01	0.2980E+04		
0.1300E+01	0.3541E+04		
0.1400E+01	0.3259E+04		
0.1500E+01	0.2816E+04		
0.1600E+01	0.3355E+04		
0.1700E+01	0.2660E+04		
0.1800E+01	0.3131E+04		
0.1900E+01	0.2524E+04		
0.2000E+01	0.2424E+04		
0.2100E+01	0.2989E+04		
0.2200E+01	0.2515E+04		
0.2300E+01	0.2367E+04		
0.2400E+01	0.2384E+04		
0.2500E+01	0.2245E+04		
0.2600E+01	0.2790E+04		
0.2700E+01	0.2279E+04		

0.2800E+01	0.1841E+04
0.2900E+01	0.2297E+04
0.3000E+01	0.1985E+04
0.3100E+01	0.2192E+04
0.3200E+01	0.1925E+04
0.3300E+01	0.1907E+04
0.3400E+01	0.1974E+04
0.3500E+01	0.1816E+04
0.3600E+01	0.1744E+04
0.3700E+01	0.1827E+04
0.3800E+01	0.1705E+04
0.3900E+01	0.1818E+04
0.4000E+01	0.1611E+04
0.4100E+01	0.1525E+04
0.4200E+01	0.1880E+04
0.4300E+01	0.1320E+04
0.4400E+01	0.1632E+04
0.4500E+01	0.1399E+04
0.4600E+01	0.1425E+04
0.4700E+01	0.1494E+04
0.4800E+01	0.1372E+04
0.4900E+01	0.1379E+04
0.5000E+01	0.1242E+04
0.5100E+01	0.1328E+04
0.5200E+01	0.1468E+04
0.5300E+01	0.1225E+04

TOTAL OF AZ= 0.1564E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 4

REACTION P,10P8N PRODUCT 7-BE Q-VALUE= 40.00 MEV

MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS

0.30 150.00 1.00 400.00 3.40 600.00 4.90

THE TOTAL ACTIVATION IS 0.3895E+04 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.2534E+03	.065059170	10794.0
2 195.00	0.2504E+03	.064294055	11143.3
3 190.00	0.2469E+03	.063385434	11513.3
4 185.00	0.2418E+03	.062087454	11906.1
5 180.00	0.2356E+03	.060485750	12323.5
6 175.00	0.2280E+03	.058547124	12768.0
7 170.00	0.2191E+03	.056255378	13242.1
8 165.00	0.2095E+03	.053786535	13748.7
9 160.00	0.2003E+03	.051427152	14291.3
10 155.00	0.1914E+03	.049141522	14873.5
11 150.00	0.1829E+03	.046959251	15499.8
12 145.00	0.1739E+03	.044636384	16175.0
13 140.00	0.1649E+03	.042342268	16904.9
14 135.00	0.1561E+03	.040087320	17696.1
15 130.00	0.1476E+03	.037885092	18556.3
16 125.00	0.1382E+03	.035493139	19494.7
17 120.00	0.1284E+03	.032977689	20521.7
18 115.00	0.1182E+03	.030348731	21650.2
19 110.00	0.1057E+03	.027141970	22895.1
20 105.00	0.9006E+02	.023123162	24274.7
21 100.00	0.7542E+02	.019364130	25811.0
22 95.00	0.5790E+02	.014866144	26475.5
23 90.00	0.4073E+02	.010458448	27194.4
24 85.00	0.2563E+02	.006581250	27975.7
25 80.00	0.1272E+02	.003265512	28829.0
26 75.00	0.0000E+00	.000000000	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5

DEPTH	GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
0.1000E+00		0.3047E+03		
0.2000E+00		0.2493E+03		
0.3000E+00		0.2199E+03		
0.4000E+00		0.1549E+03		
0.5000E+00		0.1514E+03		
0.6000E+00		0.1336E+03		
0.7000E+00		0.1177E+03		
0.8000E+00		0.9598E+02		
0.9000E+00		0.1001E+03		
0.1000E+01		0.8418E+02		
0.1100E+01		0.1023E+03		
0.1200E+01		0.7668E+02		
0.1300E+01		0.9030E+02		
0.1400E+01		0.8383E+02		
0.1500E+01		0.7206E+02		
0.1600E+01		0.8600E+02		
0.1700E+01		0.6788E+02		
0.1800E+01		0.8044E+02		
0.1900E+01		0.6412E+02		
0.2000E+01		0.6152E+02		
0.2100E+01		0.7521E+02		
0.2200E+01		0.6307E+02		
0.2300E+01		0.5959E+02		
0.2400E+01		0.6053E+02		
0.2500E+01		0.5678E+02		
0.2600E+01		0.6980E+02		
0.2700E+01		0.5657E+02		
0.2800E+01		0.4549E+02		
0.2900E+01		0.5726E+02		
0.3000E+01		0.4908E+02		
0.3100E+01		0.5418E+02		
0.3200E+01		0.4734E+02		
0.3300E+01		0.4705E+02		
0.3400E+01		0.4834E+02		
0.3500E+01		0.4471E+02		
0.3600E+01		0.4216E+02		
0.3700E+01		0.4451E+02		
0.3800E+01		0.4108E+02		
0.3900E+01		0.4398E+02		
0.4000E+01		0.3927E+02		
0.4100E+01		0.3667E+02		
0.4200E+01		0.4536E+02		
0.4300E+01		0.3172E+02		
0.4400E+01		0.3924E+02		
0.4500E+01		0.3280E+02		
0.4600E+01		0.3357E+02		
0.4700E+01		0.3587E+02		
0.4800E+01		0.3221E+02		
0.4900E+01		0.3333E+02		
0.5000E+01		0.2944E+02		
0.5100E+01		0.3143E+02		
0.5200E+01		0.3489E+02		
0.5300E+01		0.2815E+02		

TOTAL OF AZ= 0.3888E+04
 PHYLAIRD job terminated at 29-MAY-1991 13:59:15.25

Accounting information:

Buffered I/O count:	77	Peak working set size:	482
Direct I/O count:	112	Peak page file size:	2527
Page faults:	678	Mounted volumes:	0
Charged CPU time:	0 00:00:10.84	Elapsed time:	0 00:01:23.22

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PTID

THE TARGET IS TI
 TM,C, AND A ARE 47.900 14.000 8.300
 NCM= 10 NQM= 2 NMC= 3

THE COVERING MATERIAL IS ALUM
 TC, CC, AND AC ARE 27.000 184.000 5.400
 THICKNESS OF COVERING MATERIAL 5.00

THE INELASTIC SECTIONS FOR COVERING

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
10.00	610.00	17.00	690.00	30.00	700.00	35.00	660.00	40.00	650.00
60.00	500.00	100.00	425.00	225.00	400.00	340.00	402.00	460.00	422.00

THE INELASTIC SECTIONS OF THE TARGET

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
20.00	1611.00	25.00	1617.00	30.00	1649.00	35.00	1703.00	40.00	1740.00
50.00	1748.00	60.00	1776.00	100.00	1662.00	225.00	1600.00	340.00	1626.00

TARGET THICKNESS 5.271 GM/CM**2 WIDTH 5.080 CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0

200.00 5.00 5.00 0.100 6
 THE NUMBER OF REACTIONS EQUAL 6

THE NUMBER OF PROTON FLUX DATA POINTS IS 15

MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY	MEV	P/SQCM*DAY
1.0	211010.0	1.5	129570.0	2.0	120000.0	2.5	120000.0	3.0	113220.0
3.7	113180.0	4.5	113430.0	6.0	108220.0	10.0	86539.0	15.0	59873.0
30.0	43843.0	50.0	36390.0	100.0	25811.0	200.0	10794.0	300.0	4017.6

THE NUMBER OF CROSS SECTION DATA POINTS IS 46
 REACTION PRODUCT V48 Q-VALUE= 4.80 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
4.80	0.01	4.90	1.50	5.23	23.00	5.54	118.00	6.30	300.00
13.30	389.00	15.92	359.00	16.42	249.00	17.81	168.00	19.13	117.00
20.58	86.90	22.25	69.90	23.83	56.10	25.34	48.10	26.78	42.90
27.76	38.80	28.16	38.50	29.67	36.00	29.77	35.30	31.67	33.00
33.58	31.40	35.41	29.70	37.17	27.90	38.86	26.10	40.78	24.00
42.63	21.60	44.76	19.50	80.80	9.30	90.90	7.73	100.40	6.57
109.40	5.83	117.90	5.31	126.40	4.95	134.60	4.63	142.50	4.34
150.10	4.05	156.00	3.63	162.00	3.54	167.30	3.13	168.00	3.36
173.70	3.25	179.30	3.06	184.90	2.94	190.30	2.87	195.50	2.72
200.70	2.36								

THE TOTAL ACTIVATION IS 0.4635E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.2524E+03	.005445325
2	195.00	0.2733E+03	.005896169
3	190.00	0.2955E+03	.006375364
4	185.00	0.2999E+03	.006469427
5	180.00	0.3417E+03	.007371480
6	175.00	0.3670E+03	.007918511
7	170.00	0.4189E+03	.009037743
8	165.00	0.4572E+03	.009863682
9	160.00	0.4977E+03	.010738334
10	155.00	0.5418E+03	.011689444
11	150.00	0.5906E+03	.012742733
12	145.00	0.6452E+03	.013920921
13	140.00	0.7092E+03	.015301387
14	135.00	0.7899E+03	.017042724
15	130.00	0.8907E+03	.019217305
16	125.00	0.1014E+04	.021885516
17	120.00	0.1179E+04	.025431728
18	115.00	0.1379E+04	.029758602
19	110.00	0.1625E+04	.035051823
20	105.00	0.1943E+04	.041928044
21	100.00	0.2340E+04	.050486911
22	95.00	0.2724E+04	.058777027
23	90.00	0.3187E+04	.068756558
24	85.00	0.3745E+04	.080808483
25	80.00	0.4605E+04	.099356726
26	75.00	0.6490E+04	.140030667
27	70.00	0.8746E+04	.188696355
28	65.00	0.0000E+00	.000000000

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	58873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00	0.1000E+00	0.8716E+03	
0.2000E+00	0.2000E+00	0.8712E+03	
0.3000E+00	0.3000E+00	0.8708E+03	
0.4000E+00	0.4000E+00	0.8705E+03	
0.5000E+00	0.5000E+00	0.8702E+03	
0.6000E+00	0.6000E+00	0.8700E+03	
0.7000E+00	0.7000E+00	0.8697E+03	
0.8000E+00	0.8000E+00	0.8695E+03	
0.9000E+00	0.9000E+00	0.8693E+03	
0.1000E+01	0.1000E+01	0.8691E+03	
0.1100E+01	0.1100E+01	0.8689E+03	
0.1200E+01	0.1200E+01	0.8689E+03	
0.1300E+01	0.1300E+01	0.8688E+03	
0.1400E+01	0.1400E+01	0.8688E+03	
0.1500E+01	0.1500E+01	0.8688E+03	
0.1600E+01	0.1600E+01	0.8688E+03	
0.1700E+01	0.1700E+01	0.8688E+03	
0.1800E+01	0.1800E+01	0.8688E+03	
0.1900E+01	0.1900E+01	0.8689E+03	
0.2000E+01	0.2000E+01	0.8689E+03	
0.2100E+01	0.2100E+01	0.8688E+03	
0.2200E+01	0.2200E+01	0.8710E+03	
0.2300E+01	0.2300E+01	0.8715E+03	
0.2400E+01	0.2400E+01	0.8717E+03	
0.2500E+01	0.2500E+01	0.8719E+03	
0.2600E+01	0.2600E+01	0.8721E+03	
0.2700E+01	0.2700E+01	0.8722E+03	
0.2800E+01	0.2800E+01	0.8724E+03	
0.2900E+01	0.2900E+01	0.8726E+03	
0.3000E+01	0.3000E+01	0.8728E+03	
0.3100E+01	0.3100E+01	0.8731E+03	
0.3200E+01	0.3200E+01	0.8733E+03	
0.3300E+01	0.3300E+01	0.8735E+03	
0.3400E+01	0.3400E+01	0.8738E+03	
0.3500E+01	0.3500E+01	0.8740E+03	
0.3600E+01	0.3600E+01	0.8741E+03	
0.3700E+01	0.3700E+01	0.8738E+03	
0.3800E+01	0.3800E+01	0.8737E+03	
0.3900E+01	0.3900E+01	0.8735E+03	
0.4000E+01	0.4000E+01	0.8747E+03	
0.4100E+01	0.4100E+01	0.8762E+03	
0.4200E+01	0.4200E+01	0.8777E+03	
0.4300E+01	0.4300E+01	0.8792E+03	
0.4400E+01	0.4400E+01	0.8807E+03	
0.4500E+01	0.4500E+01	0.8822E+03	
0.4600E+01	0.4600E+01	0.8838E+03	
0.4700E+01	0.4700E+01	0.8854E+03	
0.4800E+01	0.4800E+01	0.8868E+03	
0.4900E+01	0.4900E+01	0.8880E+03	
0.5000E+01	0.5000E+01	0.8892E+03	
0.5100E+01	0.5100E+01	0.8904E+03	
0.5200E+01	0.5200E+01	0.8916E+03	
0.5300E+01	0.5300E+01	0.8929E+03	

TOTAL OF AZ= 0.4635E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

REACTION	2P	PRODUCT	SC47	Q-VALUE=	11.40 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS
13.30	0.55	15.92	0.80	16.42	1.21
				17.81	2.02
				19.13	3.53

20.58	5.85	22.25	8.66	23.83	11.40	25.34	13.80	26.78	16.30
27.76	18.10	28.16	18.70	29.67	21.40	29.77	21.30	31.67	23.00
33.58	22.50	35.41	21.20	37.17	20.10	38.86	19.40	40.78	18.80
42.63	18.40	44.76	18.10	80.80	21.30	90.90	20.80	100.40	20.10
109.40	23.30	117.90	20.10	126.40	20.30	134.60	20.50	142.50	20.40
150.10	20.40	156.00	20.20	162.00	19.90	167.30	19.70	168.00	20.10
173.70	20.10	173.30	19.80	184.90	19.60	190.30	19.80	195.50	19.70
200.70	19.60								

THE TOTAL ACTIVATION IS 0.8076E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.1656E+04	.020509874
2	195.00	0.1730E+04	.021425558
3	190.00	0.1802E+04	.022306755
4	185.00	0.1831E+04	.022665624
5	180.00	0.1916E+04	.023719501
6	175.00	0.2010E+04	.024884885
7	170.00	0.2101E+04	.026016133
8	165.00	0.2181E+04	.027007695
9	160.00	0.2272E+04	.028134607
10	155.00	0.2366E+04	.029296579
11	150.00	0.2449E+04	.030321708
12	145.00	0.2538E+04	.031429596
13	140.00	0.2711E+04	.033567227
14	135.00	0.3131E+04	.038765069
15	130.00	0.3124E+04	.038674805
16	125.00	0.3055E+04	.037822530
17	120.00	0.3281E+04	.040628072
18	115.00	0.3517E+04	.043547392
19	110.00	0.3765E+04	.046614554
20	105.00	0.3901E+04	.048236515
21	100.00	0.4027E+04	.049863406
22	95.00	0.4009E+04	.049634334
23	90.00	0.3996E+04	.049476713
24	85.00	0.3986E+04	.049351834
25	80.00	0.4043E+04	.050065078
26	75.00	0.4684E+04	.057997648
27	70.00	0.4682E+04	.057976324
28	65.00	0.0000E+00	.000000000
29	60.00	0.0000E+00	.000000000
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1618E+04
0.2000E+00	0.1615E+04
0.3000E+00	0.1612E+04
0.4000E+00	0.1608E+04
0.5000E+00	0.1604E+04
0.6000E+00	0.1601E+04
0.7000E+00	0.1597E+04
0.8000E+00	0.1593E+04
0.9000E+00	0.1590E+04
0.1000E+01	0.1586E+04
0.1100E+01	0.1582E+04
0.1200E+01	0.1579E+04
0.1300E+01	0.1575E+04
0.1400E+01	0.1571E+04
0.1500E+01	0.1568E+04
0.1600E+01	0.1564E+04
0.1700E+01	0.1561E+04
0.1800E+01	0.1557E+04

0.1900E+01	0.1554E+04
0.2000E+01	0.1550E+04
0.2100E+01	0.1547E+04
0.2200E+01	0.1544E+04
0.2300E+01	0.1540E+04
0.2400E+01	0.1536E+04
0.2500E+01	0.1532E+04
0.2600E+01	0.1528E+04
0.2700E+01	0.1525E+04
0.2800E+01	0.1521E+04
0.2900E+01	0.1517E+04
0.3000E+01	0.1513E+04
0.3100E+01	0.1509E+04
0.3200E+01	0.1506E+04
0.3300E+01	0.1502E+04
0.3400E+01	0.1498E+04
0.3500E+01	0.1494E+04
0.3600E+01	0.1491E+04
0.3700E+01	0.1487E+04
0.3800E+01	0.1483E+04
0.3900E+01	0.1480E+04
0.4000E+01	0.1476E+04
0.4100E+01	0.1472E+04
0.4200E+01	0.1469E+04
0.4300E+01	0.1465E+04
0.4400E+01	0.1461E+04
0.4500E+01	0.1457E+04
0.4600E+01	0.1454E+04
0.4700E+01	0.1450E+04
0.4800E+01	0.1446E+04
0.4900E+01	0.1443E+04
0.5000E+01	0.1439E+04
0.5100E+01	0.1435E+04
0.5200E+01	0.1432E+04
0.5300E+01	0.1428E+04

TOTAL OF AZ= 0.8076E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

REACTION	2PN	PRODUCT	SC46	Q-VALUE=	10.50 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	MBS
13.30 1.26	15.92 1.76	16.42 2.14	17.81 3.16	19.13 4.04	
20.58 4.76	22.25 6.00	23.83 7.40	25.34 8.40	26.78 9.60	
27.76 10.10	28.16 10.40	29.67 12.40	29.77 12.50	31.67 18.10	
33.58 27.30	35.41 36.80	37.17 46.10	38.86 54.10	40.78 61.80	
42.63 64.20	44.76 66.10	80.80 44.00	90.90 40.30	100.40 38.50	
109.40 36.70	117.90 35.20	126.40 34.70	134.60 34.00	142.50 33.60	
150.10 32.50	156.00 31.90	162.00 31.60	167.30 31.00	168.00 30.80	
173.70 30.90	179.30 30.20	184.90 30.00	190.30 30.10	195.50 29.60	
200.70 29.60					

THE TOTAL ACTIVATION IS 0.1641E+06 NUCLEI /DAY

PROTON ENERGY	MEV	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
1	200.00	0.2531E+04	.015417838	10794.0
2	195.00	0.2649E+04	.016140077	11143.3
3	190.00	0.2766E+04	.016849544	11513.3
4	185.00	0.2888E+04	.017592104	11906.1
5	180.00	0.3038E+04	.018506441	12323.5
6	175.00	0.3178E+04	.019363418	12768.0
7	170.00	0.3355E+04	.020439683	13242.1
8	165.00	0.3567E+04	.021730401	13748.7
9	160.00	0.3755E+04	.022877758	14291.3
10	155.00	0.3946E+04	.024037352	14873.5
11	150.00	0.4168E+04	.025392054	15499.8
12	145.00	0.4394E+04	.026768064	16175.0
13	140.00	0.4658E+04	.028375749	16904.9
14	135.00	0.5012E+04	.030534796	17696.1
15	130.00	0.5414E+04	.032981899	18556.3
16	125.00	0.5859E+04	.035696004	19494.7
17	120.00	0.6338E+04	.038613878	20521.7
18	115.00	0.6961E+04	.042410992	21650.2
19	110.00	0.7744E+04	.047176268	22895.1
20	105.00	0.8757E+04	.053348169	24274.7

21	100.00	0.9962E+04	.060690612	25811.0
22	95.00	0.1095E+05	.066685796	26475.5
23	90.00	0.1207E+05	.073533095	27194.4
24	85.00	0.1335E+05	.081342965	27975.7
25	80.00	0.1429E+05	.087060444	28829.0
26	75.00	0.9586E+04	.058401067	29765.9
27	70.00	0.2960E+04	.018033491	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.3332E+04		
0.2000E+00		0.3322E+04		
0.3000E+00		0.3313E+04		
0.4000E+00		0.3303E+04		
0.5000E+00		0.3294E+04		
0.6000E+00		0.3284E+04		
0.7000E+00		0.3275E+04		
0.8000E+00		0.3266E+04		
0.9000E+00		0.3257E+04		
0.1000E+01		0.3247E+04		
0.1100E+01		0.3238E+04		
0.1200E+01		0.3229E+04		
0.1300E+01		0.3220E+04		
0.1400E+01		0.3210E+04		
0.1500E+01		0.3201E+04		
0.1600E+01		0.3192E+04		
0.1700E+01		0.3182E+04		
0.1800E+01		0.3173E+04		
0.1900E+01		0.3164E+04		
0.2000E+01		0.3155E+04		
0.2100E+01		0.3145E+04		
0.2200E+01		0.3136E+04		
0.2300E+01		0.3127E+04		
0.2400E+01		0.3118E+04		
0.2500E+01		0.3110E+04		
0.2600E+01		0.3101E+04		
0.2700E+01		0.3092E+04		
0.2800E+01		0.3083E+04		
0.2900E+01		0.3075E+04		
0.3000E+01		0.3066E+04		
0.3100E+01		0.3058E+04		
0.3200E+01		0.3049E+04		
0.3300E+01		0.3041E+04		
0.3400E+01		0.3032E+04		
0.3500E+01		0.3024E+04		
0.3600E+01		0.3016E+04		
0.3700E+01		0.3008E+04		
0.3800E+01		0.3000E+04		
0.3900E+01		0.2991E+04		
0.4000E+01		0.2983E+04		
0.4100E+01		0.2974E+04		
0.4200E+01		0.2966E+04		
0.4300E+01		0.2958E+04		
0.4400E+01		0.2950E+04		
0.4500E+01		0.2942E+04		
0.4600E+01		0.2933E+04		
0.4700E+01		0.2925E+04		
0.4800E+01		0.2917E+04		
0.4900E+01		0.2909E+04		
0.5000E+01		0.2901E+04		

0.5100E+01 0.2893E+04
 0.5200E+01 0.2885E+04
 0.5300E+01 0.2877E+04
 TOTAL OF AZ= 0.1641E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 41
 REACTION 2P3N PRODUCT SC44M Q-VALUE= 2.19 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 13.30 0.35 15.92 0.62 16.42 0.98 17.81 1.23 19.13 1.30
 20.58 1.24 22.25 2.67 23.83 6.10 25.34 9.90 26.78 11.10
 27.76 12.40 28.16 12.90 29.67 15.00 29.77 14.90 31.67 16.70
 33.58 17.00 35.41 16.70 37.17 15.30 38.86 14.40 40.78 13.30
 42.63 12.20 44.76 11.70 80.80 20.30 90.90 17.90 100.40 15.80
 109.40 14.90 117.90 13.90 126.40 13.40 134.60 12.90 142.50 12.30
 150.10 11.90 156.00 12.10 162.00 11.70 167.30 11.00 168.00 11.40
 173.70 11.20 179.30 10.70 184.90 10.40 190.30 10.50 195.50 10.30
 200.70 10.20

THE TOTAL ACTIVATION IS 0.5821E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.8874E+03	.015244485	10794.0
2 195.00	0.9489E+03	.016301796	11143.3
3 190.00	0.1012E+04	.017376775	11513.3
4 185.00	0.1036E+04	.017805234	11906.1
5 180.00	0.1132E+04	.019440820	12323.5
6 175.00	0.1199E+04	.020593474	12768.0
7 170.00	0.1229E+04	.021108167	13242.1
8 165.00	0.1306E+04	.022432262	13748.7
9 160.00	0.1399E+04	.024031229	14291.3
10 155.00	0.1502E+04	.025798321	14873.5
11 150.00	0.1605E+04	.027579824	15499.8
12 145.00	0.1717E+04	.029487627	16175.0
13 140.00	0.1848E+04	.031754833	16904.9
14 135.00	0.2026E+04	.034808550	17696.1
15 130.00	0.2210E+04	.037958026	18556.3
16 125.00	0.2428E+04	.041711852	19494.7
17 120.00	0.2757E+04	.047361176	20521.7
18 115.00	0.3132E+04	.053796042	21650.2
19 110.00	0.3555E+04	.061072219	22895.1
20 105.00	0.3513E+04	.060348172	24274.7
21 100.00	0.3395E+04	.058321036	25811.0
22 95.00	0.3159E+04	.054274220	26475.5
23 90.00	0.2940E+04	.050507538	27194.4
24 85.00	0.2733E+04	.046952020	27975.7
25 80.00	0.2673E+04	.045921184	28829.0
26 75.00	0.3589E+04	.061654791	29765.9
27 70.00	0.3281E+04	.056358226	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.1168E+04
 0.2000E+00 0.1165E+04
 0.3000E+00 0.1163E+04
 0.4000E+00 0.1160E+04
 0.5000E+00 0.1157E+04
 0.6000E+00 0.1154E+04
 0.7000E+00 0.1151E+04
 0.8000E+00 0.1149E+04
 0.9000E+00 0.1146E+04
 0.1000E+01 0.1143E+04

0.1100E+01	0.1140E+04
0.1200E+01	0.1137E+04
0.1300E+01	0.1135E+04
0.1400E+01	0.1132E+04
0.1500E+01	0.1129E+04
0.1600E+01	0.1127E+04
0.1700E+01	0.1124E+04
0.1800E+01	0.1122E+04
0.1900E+01	0.1119E+04
0.2000E+01	0.1116E+04
0.2100E+01	0.1114E+04
0.2200E+01	0.1112E+04
0.2300E+01	0.1110E+04
0.2400E+01	0.1107E+04
0.2500E+01	0.1104E+04
0.2600E+01	0.1101E+04
0.2700E+01	0.1099E+04
0.2800E+01	0.1096E+04
0.2900E+01	0.1093E+04
0.3000E+01	0.1091E+04
0.3100E+01	0.1088E+04
0.3200E+01	0.1085E+04
0.3300E+01	0.1083E+04
0.3400E+01	0.1080E+04
0.3500E+01	0.1078E+04
0.3600E+01	0.1075E+04
0.3700E+01	0.1072E+04
0.3800E+01	0.1070E+04
0.3900E+01	0.1067E+04
0.4000E+01	0.1065E+04
0.4100E+01	0.1062E+04
0.4200E+01	0.1059E+04
0.4300E+01	0.1056E+04
0.4400E+01	0.1053E+04
0.4500E+01	0.1051E+04
0.4600E+01	0.1048E+04
0.4700E+01	0.1045E+04
0.4800E+01	0.1042E+04
0.4900E+01	0.1039E+04
0.5000E+01	0.1037E+04
0.5100E+01	0.1034E+04
0.5200E+01	0.1031E+04
0.5300E+01	0.1028E+04

TOTAL OF AZ= 0.5821E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 22

REACTION	2P4N	PRODUCT	SC43	Q-VALUE=	3.01 MEV
MEV	MBS	MEV	MBS	MEV	MBS
13.30	2.52	15.92	3.50	16.42	3.95
20.58	3.16	22.25	2.94	23.83	3.04
27.76	3.08	28.16	3.41	29.67	3.13
33.58	3.38	35.41	5.50	37.17	8.20
42.63	14.90	44.76	15.60		

THE TOTAL ACTIVATION IS 0.2842E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.2524E+05	0.88817328
2	195.00	0.2322E+05	0.81691481
3	190.00	0.2136E+05	0.75173475
4	185.00	0.1967E+05	0.69209918
5	180.00	0.1812E+05	0.63752249
6	175.00	0.1670E+05	0.58756135
7	170.00	0.1540E+05	0.54181691
8	165.00	0.1421E+05	0.49992003
9	160.00	0.1312E+05	0.46153892
10	155.00	0.1212E+05	0.42636931
11	150.00	0.1120E+05	0.39413285
12	145.00	0.1036E+05	0.36457643
13	140.00	0.9591E+04	0.33746954
14	135.00	0.8884E+04	0.31250140
15	130.00	0.8235E+04	0.28977958
16	125.00	0.7639E+04	0.26880562

17	120.00	0.7089E+04	.024943190	20521.7
18	115.00	0.6581E+04	.023155311	21650.2
19	110.00	0.6112E+04	.021506933	22895.1
20	105.00	0.5680E+04	.019987907	24274.7
21	100.00	0.5283E+04	.018588226	25811.0
22	95.00	0.4727E+04	.016634511	26475.5
23	90.00	0.4227E+04	.014873546	27194.4
24	85.00	0.3772E+04	.013271511	27975.7
25	80.00	0.3331E+04	.011721790	28829.0
26	75.00	0.1627E+04	.005724152	29765.9
27	70.00	0.7080E+03	.002491346	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLBI/DAY		
0.1000E+00		0.5788E+04		
0.2000E+00		0.5770E+04		
0.3000E+00		0.5753E+04		
0.4000E+00		0.5735E+04		
0.5000E+00		0.5718E+04		
0.6000E+00		0.5701E+04		
0.7000E+00		0.5685E+04		
0.8000E+00		0.5668E+04		
0.9000E+00		0.5651E+04		
0.1000E+01		0.5634E+04		
0.1100E+01		0.5618E+04		
0.1200E+01		0.5601E+04		
0.1300E+01		0.5585E+04		
0.1400E+01		0.5568E+04		
0.1500E+01		0.5552E+04		
0.1600E+01		0.5535E+04		
0.1700E+01		0.5519E+04		
0.1800E+01		0.5503E+04		
0.1900E+01		0.5487E+04		
0.2000E+01		0.5470E+04		
0.2100E+01		0.5454E+04		
0.2200E+01		0.5438E+04		
0.2300E+01		0.5422E+04		
0.2400E+01		0.5406E+04		
0.2500E+01		0.5390E+04		
0.2600E+01		0.5374E+04		
0.2700E+01		0.5358E+04		
0.2800E+01		0.5342E+04		
0.2900E+01		0.5326E+04		
0.3000E+01		0.5310E+04		
0.3100E+01		0.5294E+04		
0.3200E+01		0.5279E+04		
0.3300E+01		0.5263E+04		
0.3400E+01		0.5247E+04		
0.3500E+01		0.5232E+04		
0.3600E+01		0.5216E+04		
0.3700E+01		0.5200E+04		
0.3800E+01		0.5184E+04		
0.3900E+01		0.5168E+04		
0.4000E+01		0.5153E+04		
0.4100E+01		0.5137E+04		
0.4200E+01		0.5122E+04		
0.4300E+01		0.5106E+04		
0.4400E+01		0.5091E+04		
0.4500E+01		0.5076E+04		
0.4600E+01		0.5061E+04		

0.4700E+01 0.5046E+04
 0.4800E+01 0.5031E+04
 0.4900E+01 0.5016E+04
 0.5000E+01 0.5001E+04
 0.5100E+01 0.4986E+04
 0.5200E+01 0.4971E+04
 0.5300E+01 0.4956E+04
 TOTAL OF AZ= 0.2842E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 6
 REACTION 4P2N PRODUCT K43 Q-VALUE= 29.40 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS
 35.41 0.05 37.17 0.08 38.86 0.14 40.78 0.27 42.63 0.46
 44.76 0.74

THE TOTAL ACTIVATION IS 0.1815E+16 NUCLEI /DAY
 PROTON PARTIAL FRACTIONAL
 ENERGY ACTIVATION ACTIVATION
 MEV NUCLEI PER DAY
 1 200.00 0.1248E+16 .687513471 PROTON
 2 195.00 0.3904E+15 .215116605 FLUX
 3 190.00 0.1218E+15 .067123458 PROTONS/DAY*CM**2
 4 185.00 0.3790E+14 .020882409
 5 180.00 0.1175E+14 .006475622
 6 175.00 0.3632E+13 .002000969
 7 170.00 0.1118E+13 .000615941
 8 165.00 0.3427E+12 .000188804
 9 160.00 0.1046E+12 .000057610
 10 155.00 0.3175E+11 .000017491
 11 150.00 0.9585E+10 .000005281
 12 145.00 0.2876E+10 .000001585
 13 140.00 0.8573E+09 .000000472
 14 135.00 0.2536E+09 .000000140
 15 130.00 0.7440E+08 .000000041
 16 125.00 0.2162E+08 .000000012
 17 120.00 0.6213E+07 .000000003
 18 115.00 0.1764E+07 .000000001
 19 110.00 0.4936E+06 .000000000
 20 105.00 0.1360E+06 .000000000
 21 100.00 0.3677E+05 .000000000
 22 95.00 0.9359E+04 .000000000
 23 90.00 0.2319E+04 .000000000
 24 85.00 0.5559E+03 .000000000
 25 80.00 0.1267E+03 .000000000
 26 75.00 0.1684E+02 .000000000
 27 70.00 0.1640E+01 .000000000
 28 65.00 0.0000E+00 .000000000
 29 60.00 0.0000E+00 .000000000
 30 55.00 0.0000E+00 .000000000
 31 50.00 0.0000E+00 .000000000
 32 45.00 0.0000E+00 .000000000
 33 40.00 0.0000E+00 .000000000
 34 35.00 0.0000E+00 .000000000
 35 30.00 0.0000E+00 .000000000
 36 25.00 0.0000E+00 .000000000
 37 20.00 0.0000E+00 .000000000
 38 15.00 0.0000E+00 .000000000
 39 10.00 0.0000E+00 .000000000
 40 5.00 0.0000E+00 .000000000

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.4226E+14
 0.2000E+00 0.4191E+14
 0.3000E+00 0.4156E+14
 0.4000E+00 0.4121E+14
 0.5000E+00 0.4087E+14
 0.6000E+00 0.4052E+14
 0.7000E+00 0.4018E+14
 0.8000E+00 0.3985E+14
 0.9000E+00 0.3952E+14
 0.1000E+01 0.3918E+14
 0.1100E+01 0.3886E+14
 0.1200E+01 0.3853E+14
 0.1300E+01 0.3821E+14

111493.4

0.1400E+01	0.3789E+14
0.1500E+01	0.3757E+14
0.1600E+01	0.3726E+14
0.1700E+01	0.3695E+14
0.1800E+01	0.3664E+14
0.1900E+01	0.3633E+14
0.2000E+01	0.3603E+14
0.2100E+01	0.3572E+14
0.2200E+01	0.3543E+14
0.2300E+01	0.3513E+14
0.2400E+01	0.3483E+14
0.2500E+01	0.3454E+14
0.2600E+01	0.3425E+14
0.2700E+01	0.3397E+14
0.2800E+01	0.3368E+14
0.2900E+01	0.3340E+14
0.3000E+01	0.3312E+14
0.3100E+01	0.3284E+14
0.3200E+01	0.3257E+14
0.3300E+01	0.3229E+14
0.3400E+01	0.3202E+14
0.3500E+01	0.3175E+14
0.3600E+01	0.3149E+14
0.3700E+01	0.3122E+14
0.3800E+01	0.3096E+14
0.3900E+01	0.3070E+14
0.4000E+01	0.3045E+14
0.4100E+01	0.3019E+14
0.4200E+01	0.2994E+14
0.4300E+01	0.2969E+14
0.4400E+01	0.2944E+14
0.4500E+01	0.2919E+14
0.4600E+01	0.2894E+14
0.4700E+01	0.2870E+14
0.4800E+01	0.2846E+14
0.4900E+01	0.2822E+14
0.5000E+01	0.2798E+14
0.5100E+01	0.2775E+14
0.5200E+01	0.2752E+14
0.5300E+01	0.2729E+14

TOTAL OF AZ= 0.1815E+16
 PHYLAIRD job terminated at 29-MAY-1991 11:58:00.67

Accounting information:

Buffered I/O count:	90	Peak working set size:	451
Direct I/O count:	162	Peak page file size:	2527
Page faults:	796	Mounted volumes:	0
Charged CPU time:	0 00:00:03.67	Elapsed time:	0 00:00:17.21

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PTID

THE TARGET IS TI
 TM,C, AND A ARE 47.900 14.000 8.300
 NCM= 10 NQM= 2 NMC= 3
 THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.400
 THICKNESS OF COVERING MATERIAL 5.00
 THE INELASTIC XSECTIONS FOR COVERING
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
 60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
 THE INELASTIC XSECTIONS OF THE TARGET
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 20.00 1611.00 25.00 1617.00 30.00 1649.00 35.00 1703.00 40.00 1740.00
 50.00 1748.00 60.00 1776.00 100.00 1662.00 225.00 1600.00 340.00 1626.00
 TARGET THICKNESS 5.271 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 89.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 6
 THE NUMBER OF REACTIONS EQUAL 6
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15
 MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
 1.0 211010.0 1.5 123570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
 3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
 30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6

THE NUMBER OF CROSS SECTION DATA POINTS IS 46
 REACTION PRODUCT V48 Q-VALUE= 4.80 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 4.80 0.01 4.90 1.50 5.23 23.00 5.54 118.00 6.30 300.00
 13.30 389.00 15.92 359.00 16.42 249.00 17.81 168.00 19.13 117.00
 20.58 86.90 22.25 69.90 23.83 56.10 25.34 48.10 26.78 42.90
 27.76 38.80 28.16 38.50 29.67 36.00 29.77 35.30 31.67 33.00
 33.58 31.40 35.41 29.70 37.17 27.90 38.86 26.10 40.78 24.00
 42.63 21.60 44.76 19.50 80.80 9.30 90.90 7.73 100.40 6.57
 109.40 5.83 117.90 5.31 126.40 4.95 134.60 4.63 142.50 4.34
 150.10 4.05 156.00 3.63 162.00 3.54 167.30 3.13 168.00 3.36
 173.70 3.25 179.30 3.06 184.90 2.94 190.30 2.87 195.50 2.72
 200.70 2.36

THE TOTAL ACTIVATION IS 0.3176E+05 NUCLEI /DAY
 PROTON PARTIAL FRACTIONAL PROTON
 ENERGY ACTIVATION ACTIVATION FLUX
 MEV NUCLEI PER DAY
 1 200.00 0.3756E+03 .011824742 10794.0
 2 195.00 0.4075E+03 .012829267 11143.3
 3 190.00 0.4366E+03 .013746189 11513.3
 4 185.00 0.4525E+03 .014248723 11906.1
 5 180.00 0.5071E+03 .015966071 12323.5
 6 175.00 0.5525E+03 .017396390 12768.0
 7 170.00 0.6246E+03 .019665519 13242.1
 8 165.00 0.6813E+03 .021452716 13748.7
 9 160.00 0.7415E+03 .023345813 14291.3
 10 155.00 0.5786E+03 .018218445 14873.5
 11 150.00 0.6308E+03 .019862216 15499.8
 12 145.00 0.6892E+03 .021701593 16175.0
 13 140.00 0.7589E+03 .023893479 16904.9
 14 135.00 0.8458E+03 .026632432 17696.1
 15 130.00 0.9548E+03 .030063026 18556.3
 16 125.00 0.1090E+04 .034327000 19494.7
 17 120.00 0.1267E+04 .039903544 20521.7
 18 115.00 0.1484E+04 .046739943 21650.2
 19 110.00 0.1327E+04 .041781578 22895.1
 20 105.00 0.1588E+04 .050012194 24274.7
 21 100.00 0.1913E+04 .060243774 25811.0
 22 95.00 0.2229E+04 .070172399 26475.5
 23 90.00 0.2004E+04 .063112266 27194.4
 24 85.00 0.2357E+04 .074221224 27975.7
 25 80.00 0.2201E+04 .069315165 28829.0
 26 75.00 0.3095E+04 .097460523 29765.9
 27 70.00 0.1965E+04 .061863799 30801.2
 28 65.00 0.0000E+00 .000000000 31953.4

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.5289E+03
0.2000E+00	0.5706E+03
0.3000E+00	0.6574E+03
0.4000E+00	0.5266E+03
0.5000E+00	0.5983E+03
0.6000E+00	0.7035E+03
0.7000E+00	0.5962E+03
0.8000E+00	0.5802E+03
0.9000E+00	0.5943E+03
0.1000E+01	0.5637E+03
0.1100E+01	0.7215E+03
0.1200E+01	0.5272E+03
0.1300E+01	0.6969E+03
0.1400E+01	0.5898E+03
0.1500E+01	0.5600E+03
0.1600E+01	0.6820E+03
0.1700E+01	0.5586E+03
0.1800E+01	0.6421E+03
0.1900E+01	0.5571E+03
0.2000E+01	0.5380E+03
0.2100E+01	0.6961E+03
0.2200E+01	0.5775E+03
0.2300E+01	0.5608E+03
0.2400E+01	0.5910E+03
0.2500E+01	0.5595E+03
0.2600E+01	0.7654E+03
0.2700E+01	0.5796E+03
0.2800E+01	0.5118E+03
0.2900E+01	0.6273E+03
0.3000E+01	0.5560E+03
0.3100E+01	0.6256E+03
0.3200E+01	0.5936E+03
0.3300E+01	0.5696E+03
0.3400E+01	0.6076E+03
0.3500E+01	0.5682E+03
0.3600E+01	0.5668E+03
0.3700E+01	0.6242E+03
0.3800E+01	0.5660E+03
0.3900E+01	0.6431E+03
0.4000E+01	0.5648E+03
0.4100E+01	0.5490E+03
0.4200E+01	0.6958E+03
0.4300E+01	0.5098E+03
0.4400E+01	0.6167E+03
0.4500E+01	0.5477E+03
0.4600E+01	0.5626E+03
0.4700E+01	0.6353E+03
0.4800E+01	0.5668E+03
0.4900E+01	0.5946E+03
0.5000E+01	0.5460E+03
0.5100E+01	0.6009E+03
0.5200E+01	0.6759E+03
0.5300E+01	0.5598E+03

TOTAL OF AZ= 0.3161E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

REACTION	2P	PRODUCT	SC47	Q-VALUE=	11.40 MEV
MEV	MBS	MEV	MBS	MEV	MBS
13.30	0.55	15.92	0.80	16.42	1.21
				17.81	2.02
				19.13	3.53

20.58	5.85	22.25	8.66	23.83	11.40	25.34	13.80	26.78	16.30
27.76	18.10	28.16	18.70	29.67	21.40	29.77	21.30	31.67	23.00
33.58	22.50	35.41	21.20	37.17	20.10	38.86	19.40	40.78	18.80
42.63	18.40	44.76	18.10	80.80	21.30	90.90	20.80	100.40	20.10
109.40	23.30	117.90	20.10	126.40	20.30	134.60	20.50	142.50	20.40
150.10	20.40	156.00	20.20	162.00	19.90	167.30	19.70	168.00	20.10
173.70	20.10	179.30	19.80	184.90	19.60	190.30	19.80	195.50	19.70
200.70	19.60								

THE TOTAL ACTIVATION IS 0.7659E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.2451E+04	.0320000709
2	195.00	0.2561E+04	.0334333851
3	190.00	0.2656E+04	.034674913
4	185.00	0.2708E+04	.035356209
5	180.00	0.2835E+04	.037016042
6	175.00	0.2972E+04	.038797807
7	170.00	0.3101E+04	.040489148
8	165.00	0.3220E+04	.042040009
9	160.00	0.3354E+04	.043794014
10	155.00	0.2515E+04	.032835241
11	150.00	0.2603E+04	.033982053
12	145.00	0.2698E+04	.035221510
13	140.00	0.2911E+04	.038012348
14	135.00	0.3336E+04	.043559130
15	130.00	0.3289E+04	.042338862
16	125.00	0.3255E+04	.042493012
17	120.00	0.3495E+04	.045630217
18	115.00	0.3743E+04	.048863944
19	110.00	0.3050E+04	.039821818
20	105.00	0.3156E+04	.041205484
21	100.00	0.3257E+04	.042530131
22	95.00	0.3242E+04	.042321898
23	90.00	0.2496E+04	.032593753
24	85.00	0.2490E+04	.032509513
25	80.00	0.1919E+04	.025055053
26	75.00	0.2232E+04	.029147515
27	70.00	0.1047E+04	.013675758
28	65.00	0.0000E+00	.000000000
29	60.00	0.0000E+00	.000000000
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1323E+04
0.2000E+00	0.1449E+04
0.3000E+00	0.1726E+04
0.4000E+00	0.1309E+04
0.5000E+00	0.1566E+04
0.6000E+00	0.1742E+04
0.7000E+00	0.1553E+04
0.8000E+00	0.1436E+04
0.9000E+00	0.1541E+04
0.1000E+01	0.1408E+04
0.1100E+01	0.1803E+04
0.1200E+01	0.1306E+04
0.1300E+01	0.1700E+04
0.1400E+01	0.1512E+04
0.1500E+01	0.1383E+04
0.1600E+01	0.1681E+04
0.1700E+01	0.1373E+04
0.1800E+01	0.1631E+04

0.1900E+01	0.1363E+04
0.2000E+01	0.1323E+04
0.2100E+01	0.1686E+04
0.2200E+01	0.1435E+04
0.2300E+01	0.1375E+04
0.2400E+01	0.1444E+04
0.2500E+01	0.1365E+04
0.2600E+01	0.1785E+04
0.2700E+01	0.1439E+04
0.2800E+01	0.1200E+04
0.2900E+01	0.1536E+04
0.3000E+01	0.1340E+04
0.3100E+01	0.1525E+04
0.3200E+01	0.1369E+04
0.3300E+01	0.1378E+04
0.3400E+01	0.1455E+04
0.3500E+01	0.1368E+04
0.3600E+01	0.1329E+04
0.3700E+01	0.1432E+04
0.3800E+01	0.1353E+04
0.3900E+01	0.1470E+04
0.4000E+01	0.1343E+04
0.4100E+01	0.1286E+04
0.4200E+01	0.1618E+04
0.4300E+01	0.1164E+04
0.4400E+01	0.1454E+04
0.4500E+01	0.1267E+04
0.4600E+01	0.1313E+04
0.4700E+01	0.1402E+04
0.4800E+01	0.1329E+04
0.4900E+01	0.1352E+04
0.5000E+01	0.1244E+04
0.5100E+01	0.1332E+04
0.5200E+01	0.1512E+04
0.5300E+01	0.1280E+04

TOTAL OF AZ= 0.7631E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	10.50 MEV
13.30	1.26	15.92	1.76	16.42	2.14	17.81	3.16	19.13	4.04		
20.58	4.76	22.25	6.00	23.83	7.40	25.34	8.40	26.78	9.60		
27.76	10.10	28.16	10.40	29.67	12.40	29.77	12.50	31.67	18.10		
33.58	27.30	35.41	36.80	37.17	46.10	38.86	54.10	40.78	61.80		
42.63	64.20	44.76	66.10	80.80	44.00	90.90	40.30	100.40	38.50		
109.40	36.70	117.90	35.20	126.40	34.70	134.60	34.00	142.50	33.60		
150.10	32.50	156.00	31.90	162.00	31.60	167.30	31.00	168.00	30.80		
173.70	30.90	179.30	30.20	184.90	30.00	190.30	30.10	195.50	29.60		
200.70	29.60										

THE TOTAL ACTIVATION IS 0.1492E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CH*2
1 200.00	0.3744E+04	.025100093	10794.0
2 195.00	0.3925E+04	.026311340	11143.3
3 190.00	0.4086E+04	.027390067	11513.3
4 185.00	0.4278E+04	.028680950	11906.1
5 180.00	0.4492E+04	.030116519	12323.5
6 175.00	0.4708E+04	.031560745	12768.0
7 170.00	0.4975E+04	.033356503	13242.1
8 165.00	0.5282E+04	.035410151	13748.7
9 160.00	0.5552E+04	.037218466	14291.3
10 155.00	0.4202E+04	.028168285	14873.5
11 150.00	0.4438E+04	.029750481	15499.8
12 145.00	0.4677E+04	.031354211	16175.0
13 140.00	0.4967E+04	.033297174	16904.9
14 135.00	0.5345E+04	.035836186	17696.1
15 130.00	0.5775E+04	.038716633	18556.3
16 125.00	0.6248E+04	.041885260	19494.7
17 120.00	0.6760E+04	.045321237	20521.7
18 115.00	0.7441E+04	.049886379	21650.2
19 110.00	0.6302E+04	.0422251222	22895.1
20 105.00	0.7130E+04	.047802236	24274.7

21	100.00	0.8113E+04	.054388903	25811.0
22	95.00	0.8916E+04	.059773877	26475.5
23	90.00	0.7573E+04	.050768543	27194.4
24	85.00	0.8380E+04	.056181069	27975.7
25	80.00	0.6752E+04	.045267470	28829.0
26	75.00	0.4440E+04	.029768150	29765.9
27	70.00	0.6620E+03	.004437860	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.2579E+04		
0.2000E+00		0.2816E+04		
0.3000E+00		0.3328E+04		
0.4000E+00		0.2553E+04		
0.5000E+00		0.3007E+04		
0.6000E+00		0.3430E+04		
0.7000E+00		0.2984E+04		
0.8000E+00		0.2813E+04		
0.9000E+00		0.2963E+04		
0.1000E+01		0.2739E+04		
0.1100E+01		0.3530E+04		
0.1200E+01		0.2537E+04		
0.1300E+01		0.3352E+04		
0.1400E+01		0.2908E+04		
0.1500E+01		0.2690E+04		
0.1600E+01		0.3288E+04		
0.1700E+01		0.2671E+04		
0.1800E+01		0.3154E+04		
0.1900E+01		0.2652E+04		
0.2000E+01		0.2561E+04		
0.2100E+01		0.3312E+04		
0.2200E+01		0.2772E+04		
0.2300E+01		0.2665E+04		
0.2400E+01		0.2809E+04		
0.2500E+01		0.2646E+04		
0.2600E+01		0.3542E+04		
0.2700E+01		0.2770E+04		
0.2800E+01		0.2342E+04		
0.2900E+01		0.2985E+04		
0.3000E+01		0.2598E+04		
0.3100E+01		0.2964E+04		
0.3200E+01		0.2685E+04		
0.3300E+01		0.2665E+04		
0.3400E+01		0.2839E+04		
0.3500E+01		0.2646E+04		
0.3600E+01		0.2599E+04		
0.3700E+01		0.2813E+04		
0.3800E+01		0.2618E+04		
0.3900E+01		0.2897E+04		
0.4000E+01		0.2599E+04		
0.4100E+01		0.2498E+04		
0.4200E+01		0.3172E+04		
0.4300E+01		0.2264E+04		
0.4400E+01		0.2834E+04		
0.4500E+01		0.2462E+04		
0.4600E+01		0.2545E+04		
0.4700E+01		0.2774E+04		
0.4800E+01		0.2567E+04		
0.4900E+01		0.2656E+04		
0.5000E+01		0.2419E+04		

0.5100E+01 0.2605E+04
 0.5200E+01 0.2976E+04
 0.5300E+01 0.2482E+04
 TOTAL OF AZ= 0.1486E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 41
 REACTION 2P3N PRODUCT SC44M Q-VALUE= 2.19 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 13.30 0.35 15.92 0.62 16.42 0.98 17.81 1.23 19.13 1.30
 20.58 1.24 22.25 2.67 23.83 6.10 25.34 9.00 26.78 11.10
 27.76 12.40 28.16 12.90 29.67 15.00 29.77 14.90 31.67 16.70
 33.58 17.00 35.41 16.70 37.17 15.30 38.86 14.40 40.78 13.30
 42.63 12.20 44.76 11.70 80.80 20.30 90.90 17.90 100.40 15.80
 109.40 14.90 117.90 13.90 126.40 13.40 134.60 12.90 142.50 12.30
 150.10 11.90 156.00 12.10 162.00 11.70 167.30 11.00 168.00 11.40
 173.70 11.20 179.30 10.70 184.90 10.40 190.30 10.50 195.50 10.30
 200.70 10.20

THE TOTAL ACTIVATION IS 0.5384E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1318E+04	.024473732	10794.0
2 195.00	0.1411E+04	.026210424	11143.3
3 190.00	0.1494E+04	.027751779	11513.3
4 185.00	0.1548E+04	.028742949	11906.1
5 180.00	0.1679E+04	.031191533	12323.5
6 175.00	0.1765E+04	.032777004	12768.0
7 170.00	0.1822E+04	.033838898	13242.1
8 165.00	0.1938E+04	.035998661	13748.7
9 160.00	0.2078E+04	.038598835	14291.3
10 155.00	0.1601E+04	.029734096	14873.5
11 150.00	0.1711E+04	.031786028	15499.8
12 145.00	0.1830E+04	.033982228	16175.0
13 140.00	0.1975E+04	.036676385	16904.9
14 135.00	0.2164E+04	.040192515	17696.1
15 130.00	0.2359E+04	.043808419	18556.3
16 125.00	0.2603E+04	.048343647	19494.7
17 120.00	0.2956E+04	.054892611	20521.7
18 115.00	0.3356E+04	.062334448	21650.2
19 110.00	0.2878E+04	.053444877	22895.1
20 105.00	0.2830E+04	.052568767	24274.7
21 100.00	0.2734E+04	.050774392	25811.0
22 95.00	0.2542E+04	.047221273	26475.5
23 90.00	0.1832E+04	.034019019	27194.4
24 85.00	0.1702E+04	.031613540	27975.7
25 80.00	0.1274E+04	.023660854	28829.0
26 75.00	0.1709E+04	.031737138	29765.9
27 70.00	0.7336E+03	.013625973	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.9226E+03
 0.2000E+00 0.1015E+04
 0.3000E+00 0.1204E+04
 0.4000E+00 0.9137E+03
 0.5000E+00 0.1089E+04
 0.6000E+00 0.1227E+04
 0.7000E+00 0.1081E+04
 0.8000E+00 0.1007E+04
 0.9000E+00 0.1074E+04
 0.1000E+01 0.9871E+03

0.1100E+01	0.1268E+04
0.1200E+01	0.9093E+03
0.1300E+01	0.1199E+04
0.1400E+01	0.1055E+04
0.1500E+01	0.9705E+03
0.1600E+01	0.1177E+04
0.1700E+01	0.9640E+03
0.1800E+01	0.1142E+04
0.1900E+01	0.9574E+03
0.2000E+01	0.9251E+03
0.2100E+01	0.1188E+04
0.2200E+01	0.1007E+04
0.2300E+01	0.9637E+03
0.2400E+01	0.1014E+04
0.2500E+01	0.9573E+03
0.2600E+01	0.1265E+04
0.2700E+01	0.1008E+04
0.2800E+01	0.8432E+03
0.2900E+01	0.1083E+04
0.3000E+01	0.9408E+03
0.3100E+01	0.1075E+04
0.3200E+01	0.9622E+03
0.3300E+01	0.9701E+03
0.3400E+01	0.1025E+04
0.3500E+01	0.9632E+03
0.3600E+01	0.9346E+03
0.3700E+01	0.1013E+04
0.3800E+01	0.9536E+03
0.3900E+01	0.1037E+04
0.4000E+01	0.9469E+03
0.4100E+01	0.9054E+03
0.4200E+01	0.1146E+04
0.4300E+01	0.8173E+03
0.4400E+01	0.1028E+04
0.4500E+01	0.8925E+03
0.4600E+01	0.9272E+03
0.4700E+01	0.9937E+03
0.4800E+01	0.9357E+03
0.4900E+01	0.9583E+03
0.5000E+01	0.8769E+03
0.5100E+01	0.9414E+03
0.5200E+01	0.1070E+04
0.5300E+01	0.9045E+03

TOTAL OF AZ= 0.5364E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 22

REACTION	2P4N	PRODUCT	SC43	Q-VALUE=	3.01 MEV
MEV	MBS	MEV	MBS	MEV	MBS
13.30	2.52	15.92	3.50	16.42	3.95
20.58	3.16	22.25	2.94	23.83	3.04
27.76	3.08	28.16	3.41	29.67	3.13
33.58	3.38	35.41	5.50	37.17	8.20
42.63	14.90	44.76	15.60	38.86	10.80
					40.76
					13.50

THE TOTAL ACTIVATION IS 0.3521E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.3655E+05	.103796847
2	195.00	0.3360E+05	.095416620
3	190.00	0.3090E+05	.087752827
4	185.00	0.2843E+05	.080742531
5	180.00	0.2617E+05	.074328095
6	175.00	0.2410E+05	.068457149
7	170.00	0.2221E+05	.063082546
8	165.00	0.2048E+05	.058160767
9	160.00	0.1889E+05	.053652402
10	155.00	0.1275E+05	.036210127
11	150.00	0.1178E+05	.033459175
12	145.00	0.1089E+05	.030936820
13	140.00	0.1008E+05	.028623432
14	135.00	0.9331E+04	.026500897
15	130.00	0.8645E+04	.024552718
16	125.00	0.8013E+04	.022757998

17	120.00	0.7429E+04	.021098705	20521.7
18	115.00	0.6890E+04	.019567048	21650.2
19	110.00	0.4916E+04	.013961311	22895.1
20	105.00	0.4566E+04	.012967038	24274.7
21	100.00	0.4243E+04	.012050369	25811.0
22	95.00	0.3794E+04	.010774966	26475.5
23	90.00	0.2629E+04	.007466875	27194.4
24	85.00	0.2345E+04	.006659328	27975.7
25	80.00	0.1568E+04	.004454557	28829.0
26	75.00	0.7456E+03	.002117594	29765.9
27	70.00	0.1589E+03	.000451254	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.6423E+04		
0.2000E+00		0.6996E+04		
0.3000E+00		0.8495E+04		
0.4000E+00		0.6310E+04		
0.5000E+00		0.7774E+04		
0.6000E+00		0.8078E+04		
0.7000E+00		0.7672E+04		
0.8000E+00		0.6769E+04		
0.9000E+00		0.7578E+04		
0.1000E+01		0.6668E+04		
0.1100E+01		0.8376E+04		
0.1200E+01		0.6340E+04		
0.1300E+01		0.7770E+04		
0.1400E+01		0.7344E+04		
0.1500E+01		0.6474E+04		
0.1600E+01		0.7888E+04		
0.1700E+01		0.6398E+04		
0.1800E+01		0.7750E+04		
0.1900E+01		0.6322E+04		
0.2000E+01		0.6224E+04		
0.2100E+01		0.7725E+04		
0.2200E+01		0.6698E+04		
0.2300E+01		0.6465E+04		
0.2400E+01		0.6650E+04		
0.2500E+01		0.6388E+04		
0.2600E+01		0.7821E+04		
0.2700E+01		0.6775E+04		
0.2800E+01		0.5467E+04		
0.2900E+01		0.6993E+04		
0.3000E+01		0.6197E+04		
0.3100E+01		0.6912E+04		
0.3200E+01		0.6175E+04		
0.3300E+01		0.6281E+04		
0.3400E+01		0.6601E+04		
0.3500E+01		0.6208E+04		
0.3600E+01		0.6012E+04		
0.3700E+01		0.6266E+04		
0.3800E+01		0.6104E+04		
0.3900E+01		0.6477E+04		
0.4000E+01		0.6033E+04		
0.4100E+01		0.5804E+04		
0.4200E+01		0.7052E+04		
0.4300E+01		0.5239E+04		
0.4400E+01		0.6426E+04		
0.4500E+01		0.5668E+04		
0.4600E+01		0.5828E+04		

0.4700E+01 0.5972E+04
 0.4800E+01 0.5975E+04
 0.4900E+01 0.5847E+04
 0.5000E+01 0.5506E+04
 0.5100E+01 0.5738E+04
 0.5200E+01 0.6491E+04
 0.5300E+01 0.5601E+04
 TOTAL OF AZ= 0.3510E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 6
 REACTION 4P2N PRODUCT K43 Q-VALUE= 29.40 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 35.41 0.05 37.17 0.08 38.86 0.14 40.78 0.27 42.63 0.46
 44.76 0.74

THE TOTAL ACTIVATION IS 0.2266E+16 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1560E+16	.688480616	10794.0
2 195.00	0.4868E+15	.214767590	11143.3
3 190.00	0.1514E+15	.066802420	11513.3
4 185.00	0.4695E+14	.020713672	11906.1
5 180.00	0.1451E+14	.006400963	12323.5
6 175.00	0.4466E+13	.001970678	12768.0
7 170.00	0.1370E+13	.000604283	13242.1
8 165.00	0.4181E+12	.000184479	13748.7
9 160.00	0.1270E+12	.000056049	14291.3
10 155.00	0.3069E+11	.000013541	14873.5
11 150.00	0.9242E+10	.000004078	15499.8
12 145.00	0.2765E+10	.000001220	16175.0
13 140.00	0.8218E+09	.000000363	16904.9
14 135.00	0.2423E+09	.000000107	17696.1
15 130.00	0.7083E+08	.000000031	18556.3
16 125.00	0.2050E+08	.000000009	19494.7
17 120.00	0.5865E+07	.000000003	20521.7
18 115.00	0.1656E+07	.000000001	21650.2
19 110.00	0.3731E+06	.000000000	22895.1
20 105.00	0.1024E+06	.000000000	24274.7
21 100.00	0.2758E+05	.000000000	25811.0
22 95.00	0.6988E+04	.000000000	26475.5
23 90.00	0.1382E+04	.000000000	27194.4
24 85.00	0.3299E+03	.000000000	27975.7
25 80.00	0.5814E+02	.000000000	28829.0
26 75.00	0.7688E+01	.000000000	29765.9
27 70.00	0.3644E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.5607E+14
0.2000E+00	0.5969E+14
0.3000E+00	0.7188E+14
0.4000E+00	0.5281E+14
0.5000E+00	0.6453E+14
0.6000E+00	0.6399E+14
0.7000E+00	0.6179E+14
0.8000E+00	0.5299E+14
0.9000E+00	0.5930E+14
0.1000E+01	0.5089E+14
0.1100E+01	0.6220E+14
0.1200E+01	0.4807E+14
0.1300E+01	0.5641E+14

0.1400E+01	0.5360E+14
0.1500E+01	0.4627E+14
0.1600E+01	0.5574E+14
0.1700E+01	0.4458E+14
0.1800E+01	0.5336E+14
0.1900E+01	0.4294E+14
0.2000E+01	0.4184E+14
0.2100E+01	0.5125E+14
0.2200E+01	0.4373E+14
0.2300E+01	0.4202E+14
0.2400E+01	0.4245E+14
0.2500E+01	0.4051E+14
0.2600E+01	0.4886E+14
0.2700E+01	0.4172E+14
0.2800E+01	0.3346E+14
0.2900E+01	0.4206E+14
0.3000E+01	0.3698E+14
0.3100E+01	0.4063E+14
0.3200E+01	0.3614E+14
0.3300E+01	0.3607E+14
0.3400E+01	0.3764E+14
0.3500E+01	0.3485E+14
0.3600E+01	0.3357E+14
0.3700E+01	0.3480E+14
0.3800E+01	0.3319E+14
0.3900E+01	0.3529E+14
0.4000E+01	0.3211E+14
0.4100E+01	0.3058E+14
0.4200E+01	0.3710E+14
0.4300E+01	0.2702E+14
0.4400E+01	0.3293E+14
0.4500E+01	0.2861E+14
0.4600E+01	0.2914E+14
0.4700E+01	0.3022E+14
0.4800E+01	0.2903E+14
0.4900E+01	0.2875E+14
0.5000E+01	0.2641E+14
0.5100E+01	0.2770E+14
0.5200E+01	0.3100E+14
0.5300E+01	0.2611E+14

TOTAL OF A2= 0.2261E+16
 FND2LAIRD job terminated at 9-JAN-1991 12:27:01.72

Accounting information:

Buffered I/O count:	91	Peak working set size:	489
Direct I/O count:	150	Peak page file size:	2458
Page faults:	725	Mounted volumes:	0
Charged CPU time:	0 00:01:05.13	Elapsed time:	0 00:01:24.19

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PTID

THE TARGET IS TI
 TM,C, AND A ARE 47.900 14.000 8.300
 NCM= 10 NQM= 2 NMC= 3
 THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.400
 THICKNESS OF COVERING MATERIAL 0.00
 THE INELASTIC XSECTIONS FOR COVERING
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
 60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
 THE INELASTIC XSECTIONS OF THE TARGET
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
 50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
 TARGET THICKNESS 5.271 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 6
 THE NUMBER OF REACTIONS EQUAL 6
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15
 MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
 1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
 3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
 30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
 THE NUMBER OF CROSS SECTION DATA POINTS IS 46
 REACTION PRODUCT V48 Q-VALUE= 4.80 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 4.80 0.01 4.90 1.50 5.23 23.00 5.54 118.00 6.30 300.00
 13.30 389.00 15.92 359.00 16.42 249.00 17.81 168.00 19.13 117.00
 20.58 86.90 22.25 69.90 23.83 56.10 25.34 48.10 26.78 42.90
 27.76 38.80 28.16 38.50 29.67 36.00 29.77 35.30 31.67 33.00
 33.58 31.40 35.41 29.70 37.17 27.90 38.86 26.10 40.78 24.00
 42.63 21.60 44.76 19.50 80.80 9.30 90.90 7.73 100.40 6.57
 109.40 5.83 117.90 5.31 126.40 4.95 134.60 4.63 142.50 4.34
 150.10 4.05 156.00 3.63 162.00 3.54 167.30 3.13 168.00 3.36
 173.70 3.25 179.30 3.06 184.90 2.94 190.30 2.87 195.50 2.72
 200.70 2.36

THE TOTAL ACTIVATION IS 0.1711E+06 NUCLEI /DAY
 PROTON PARTIAL FRACTIONAL
 ENERGY ACTIVATION ACTIVATION
 MEV NUCLEI PER DAY
 1 200.00 0.2524E+03 .001474731 10794.0
 2 195.00 0.2733E+03 .001596831 11143.3
 3 190.00 0.2955E+03 .001726609 11513.3
 4 185.00 0.2999E+03 .001752083 11906.1
 5 180.00 0.3417E+03 .001996382 12323.5
 6 175.00 0.3670E+03 .002144532 12768.0
 7 170.00 0.4189E+03 .002447648 13242.1
 8 165.00 0.4572E+03 .002671333 13748.7
 9 160.00 0.4977E+03 .002908211 14291.3
 10 155.00 0.5418E+03 .003165795 14873.5
 11 150.00 0.5906E+03 .003451053 15499.8
 12 145.00 0.6452E+03 .003770135 16175.0
 13 140.00 0.7092E+03 .004144000 16904.9
 14 135.00 0.7899E+03 .004615598 17696.1
 15 130.00 0.8907E+03 .005204530 18556.3
 16 125.00 0.1014E+04 .005927148 19494.7
 17 120.00 0.1179E+04 .006887551 20521.7
 18 115.00 0.1379E+04 .008059378 21650.2
 19 110.00 0.1625E+04 .009492915 22895.1
 20 105.00 0.1943E+04 .011355439 24274.7
 21 100.00 0.2340E+04 .013673125 25811.0
 22 95.00 0.2724E+04 .015918298 26475.5
 23 90.00 0.3187E+04 .018621005 27194.4
 24 85.00 0.3745E+04 .021884969 27975.7
 25 80.00 0.4605E+04 .026908301 28829.0
 26 75.00 0.6490E+04 .037923828 29765.9
 27 70.00 0.8746E+04 .051103719 30801.2
 28 65.00 0.2199E+05 .128516570 31953.4

29	60.00	0.8275E+05	.483541369	33246.3
30	55.00	0.2004E+05	.117116883	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.3858E+04
0.2000E+00	0.3885E+04
0.3000E+00	0.3914E+04
0.4000E+00	0.3946E+04
0.5000E+00	0.3981E+04
0.6000E+00	0.4028E+04
0.7000E+00	0.4174E+04
0.8000E+00	0.4343E+04
0.9000E+00	0.4494E+04
0.1000E+01	0.4482E+04
0.1100E+01	0.4469E+04
0.1200E+01	0.4025E+04
0.1300E+01	0.3644E+04
0.1400E+01	0.3109E+04
0.1500E+01	0.2976E+04
0.1600E+01	0.2986E+04
0.1700E+01	0.2998E+04
0.1800E+01	0.3010E+04
0.1900E+01	0.3022E+04
0.2000E+01	0.3035E+04
0.2100E+01	0.3048E+04
0.2200E+01	0.3062E+04
0.2300E+01	0.3072E+04
0.2400E+01	0.3060E+04
0.2500E+01	0.3048E+04
0.2600E+01	0.3037E+04
0.2700E+01	0.3025E+04
0.2800E+01	0.3014E+04
0.2900E+01	0.3003E+04
0.3000E+01	0.2991E+04
0.3100E+01	0.2981E+04
0.3200E+01	0.2970E+04
0.3300E+01	0.2963E+04
0.3400E+01	0.2957E+04
0.3500E+01	0.2952E+04
0.3600E+01	0.2946E+04
0.3700E+01	0.2941E+04
0.3800E+01	0.2936E+04
0.3900E+01	0.2932E+04
0.4000E+01	0.2929E+04
0.4100E+01	0.2927E+04
0.4200E+01	0.2927E+04
0.4300E+01	0.2931E+04
0.4400E+01	0.2937E+04
0.4500E+01	0.2944E+04
0.4600E+01	0.2951E+04
0.4700E+01	0.2960E+04
0.4800E+01	0.2969E+04
0.4900E+01	0.2979E+04
0.5000E+01	0.2991E+04
0.5100E+01	0.2843E+04
0.5200E+01	0.2454E+04
0.5300E+01	0.2080E+04

TOTAL OF AZ= 0.1711E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

REACTION 2P PRODUCT SC47 Q-VALUE= 11.40 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
13.30	0.55	15.92	0.80	16.42	1.21	17.81	2.02	19.13	3.53

20.58	5.85	22.25	8.66	23.83	11.40	25.34	13.80	26.78	16.30
27.76	18.10	28.16	18.70	29.67	21.40	29.77	21.30	31.67	23.00
33.58	22.50	35.41	21.20	37.17	20.10	38.86	19.40	40.78	18.80
42.63	18.40	44.76	18.10	80.80	21.30	90.90	20.80	100.40	20.10
109.40	23.30	117.90	20.10	126.40	20.30	134.60	20.50	142.50	20.40
150.10	20.40	156.00	20.20	162.00	19.90	167.30	19.70	168.00	20.10
173.70	20.10	179.30	19.80	184.90	19.60	190.30	19.80	195.50	19.70
200.70	19.60								

THE TOTAL ACTIVATION IS 0.8261E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.1656E+04	.020051202
2	195.00	0.1730E+04	.020946408
3	190.00	0.1802E+04	.021807898
4	185.00	0.1831E+04	.022158742
5	180.00	0.1916E+04	.023189049
6	175.00	0.2010E+04	.024328372
7	170.00	0.2101E+04	.025434321
8	165.00	0.2181E+04	.026403708
9	160.00	0.2272E+04	.027505418
10	155.00	0.2366E+04	.028641405
11	150.00	0.2449E+04	.029643608
12	145.00	0.2538E+04	.030726722
13	140.00	0.2711E+04	.032816544
14	135.00	0.3131E+04	.037888146
15	130.00	0.3124E+04	.037809901
16	125.00	0.3055E+04	.036976684
17	120.00	0.3281E+04	.039719485
18	115.00	0.3517E+04	.042573519
19	110.00	0.3765E+04	.045572087
20	105.00	0.3901E+04	.047216434
21	100.00	0.4027E+04	.048748285
22	95.00	0.4009E+04	.048524339
23	90.00	0.3996E+04	.048370242
24	85.00	0.3986E+04	.048248153
25	80.00	0.4043E+04	.048945446
26	75.00	0.4684E+04	.056700617
27	70.00	0.4682E+04	.056679770
28	65.00	0.1727E+04	.020904051
29	60.00	0.1206E+03	.001459464
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1688E+04
0.2000E+00	0.1683E+04
0.3000E+00	0.1678E+04
0.4000E+00	0.1673E+04
0.5000E+00	0.1668E+04
0.6000E+00	0.1663E+04
0.7000E+00	0.1657E+04
0.8000E+00	0.1652E+04
0.9000E+00	0.1647E+04
0.1000E+01	0.1641E+04
0.1100E+01	0.1636E+04
0.1200E+01	0.1631E+04
0.1300E+01	0.1627E+04
0.1400E+01	0.1622E+04
0.1500E+01	0.1617E+04
0.1600E+01	0.1612E+04
0.1700E+01	0.1607E+04
0.1800E+01	0.1603E+04

0.1900E+01	0.1598E+04
0.2000E+01	0.1593E+04
0.2100E+01	0.1588E+04
0.2200E+01	0.1584E+04
0.2300E+01	0.1579E+04
0.2400E+01	0.1574E+04
0.2500E+01	0.1569E+04
0.2600E+01	0.1564E+04
0.2700E+01	0.1559E+04
0.2800E+01	0.1554E+04
0.2900E+01	0.1549E+04
0.3000E+01	0.1544E+04
0.3100E+01	0.1539E+04
0.3200E+01	0.1534E+04
0.3300E+01	0.1527E+04
0.3400E+01	0.1522E+04
0.3500E+01	0.1517E+04
0.3600E+01	0.1512E+04
0.3700E+01	0.1507E+04
0.3800E+01	0.1503E+04
0.3900E+01	0.1498E+04
0.4000E+01	0.1493E+04
0.4100E+01	0.1489E+04
0.4200E+01	0.1484E+04
0.4300E+01	0.1479E+04
0.4400E+01	0.1475E+04
0.4500E+01	0.1470E+04
0.4600E+01	0.1466E+04
0.4700E+01	0.1461E+04
0.4800E+01	0.1457E+04
0.4900E+01	0.1452E+04
0.5000E+01	0.1448E+04
0.5100E+01	0.1444E+04
0.5200E+01	0.1440E+04
0.5300E+01	0.1436E+04

TOTAL OF AZ= 0.8261E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

REACTION	2PN	PRODUCT	SC46	Q-VALUE=	10.50 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	MBS
13.30 1.26	15.92 1.76	16.42 2.14	17.81 3.16	19.13 4.04	
20.58 4.76	22.25 6.00	23.83 7.40	25.34 8.40	26.78 9.60	
27.76 10.10	28.16 10.40	29.67 12.40	29.77 12.50	31.67 18.10	
33.58 27.30	35.41 36.80	37.17 46.10	38.86 54.10	40.78 61.80	
42.63 64.20	44.76 66.10	80.80 44.00	90.90 40.30	100.40 38.50	
109.40 36.70	117.90 35.20	126.40 34.70	134.60 34.00	142.50 33.60	
150.10 32.50	156.00 31.90	162.00 31.60	167.30 31.00	168.00 30.80	
173.70 30.90	179.30 30.20	184.90 30.00	190.30 30.10	195.50 29.60	
200.70 29.60					

THE TOTAL ACTIVATION IS 0.1657E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1 200.00	0.2531E+04	.015270562	10794.0
2 195.00	0.2649E+04	.015985902	11143.3
3 190.00	0.2766E+04	.016688593	11513.3
4 185.00	0.2888E+04	.017424060	11906.1
5 180.00	0.3038E+04	.018329663	12323.5
6 175.00	0.3178E+04	.019178454	12768.0
7 170.00	0.3355E+04	.020244436	13242.1
8 165.00	0.3567E+04	.021522826	13748.7
9 160.00	0.3755E+04	.022659224	14291.3
10 155.00	0.3946E+04	.023807740	14873.5
11 150.00	0.4168E+04	.025149504	15499.8
12 145.00	0.4394E+04	.026512370	16175.0
13 140.00	0.4658E+04	.028104696	16904.9
14 135.00	0.5012E+04	.030243119	17696.1
15 130.00	0.5414E+04	.032666847	18556.3
16 125.00	0.5859E+04	.035355028	19494.7
17 120.00	0.6338E+04	.038245030	20521.7
18 115.00	0.6961E+04	.042005870	21650.2
19 110.00	0.7744E+04	.046725631	22895.1
20 105.00	0.8757E+04	.052838571	24274.7

21	100.00	0.9962E+04	.060110878	25811.0
22	95.00	0.1095E+05	.066048793	26475.5
23	90.00	0.1207E+05	.072830692	27194.4
24	85.00	0.1335E+05	.080565952	27975.7
25	80.00	0.1429E+05	.086228825	28829.0
26	75.00	0.9586E+04	.057843205	29765.9
27	70.00	0.2960E+04	.017861230	30801.2
28	65.00	0.1319E+04	.007958872	31953.4
29	60.00	0.2641E+03	.001593408	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47388.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.3384E+04		
0.2000E+00		0.3373E+04		
0.3000E+00		0.3362E+04		
0.4000E+00		0.3352E+04		
0.5000E+00		0.3341E+04		
0.6000E+00		0.3331E+04		
0.7000E+00		0.3320E+04		
0.8000E+00		0.3310E+04		
0.9000E+00		0.3300E+04		
0.1000E+01		0.3290E+04		
0.1100E+01		0.3280E+04		
0.1200E+01		0.3270E+04		
0.1300E+01		0.3259E+04		
0.1400E+01		0.3249E+04		
0.1500E+01		0.3239E+04		
0.1600E+01		0.3229E+04		
0.1700E+01		0.3219E+04		
0.1800E+01		0.3209E+04		
0.1900E+01		0.3199E+04		
0.2000E+01		0.3189E+04		
0.2100E+01		0.3179E+04		
0.2200E+01		0.3169E+04		
0.2300E+01		0.3160E+04		
0.2400E+01		0.3150E+04		
0.2500E+01		0.3140E+04		
0.2600E+01		0.3131E+04		
0.2700E+01		0.3121E+04		
0.2800E+01		0.3112E+04		
0.2900E+01		0.3103E+04		
0.3000E+01		0.3094E+04		
0.3100E+01		0.3084E+04		
0.3200E+01		0.3075E+04		
0.3300E+01		0.3066E+04		
0.3400E+01		0.3057E+04		
0.3500E+01		0.3049E+04		
0.3600E+01		0.3040E+04		
0.3700E+01		0.3027E+04		
0.3800E+01		0.3019E+04		
0.3900E+01		0.3010E+04		
0.4000E+01		0.3001E+04		
0.4100E+01		0.2993E+04		
0.4200E+01		0.2984E+04		
0.4300E+01		0.2975E+04		
0.4400E+01		0.2966E+04		
0.4500E+01		0.2958E+04		
0.4600E+01		0.2949E+04		
0.4700E+01		0.2941E+04		
0.4800E+01		0.2932E+04		
0.4900E+01		0.2924E+04		
0.5000E+01		0.2915E+04		

0.5100E+01 0.2906E+04
 0.5200E+01 0.2898E+04
 0.5300E+01 0.2889E+04
 TOTAL OF AZ= 0.1657E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 41
 REACTION 2P3N PRODUCT SC44M Q-VALUE= 2.19 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 13.30 0.35 15.92 0.62 16.42 0.98 17.81 1.23 19.13 1.30
 20.58 1.24 22.25 2.67 23.83 6.10 25.34 9.00 26.78 11.10
 27.76 12.40 28.16 12.90 29.67 15.00 29.77 14.90 31.67 16.70
 33.58 17.00 35.41 16.70 37.17 15.30 38.86 14.40 40.78 13.30
 42.63 12.20 44.76 11.70 80.80 20.30 90.90 17.90 100.40 15.80
 109.40 14.90 117.90 13.90 126.40 13.40 134.60 12.90 142.50 12.30
 150.10 11.90 156.00 12.10 162.00 11.70 167.30 11.00 168.00 11.40
 173.70 11.20 179.30 10.70 184.90 10.40 190.30 10.50 195.50 10.30
 200.70 10.20

THE TOTAL ACTIVATION IS 0.5903E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.8874E+03	.015033309	10794.0
2 195.00	0.9489E+03	.016075974	11143.3
3 190.00	0.1012E+04	.017136062	11513.3
4 185.00	0.1036E+04	.017558586	11906.1
5 180.00	0.1132E+04	.019171514	12323.5
6 175.00	0.1199E+04	.020308200	12768.0
7 170.00	0.1229E+04	.020815764	13242.1
8 165.00	0.1306E+04	.022121517	13748.7
9 160.00	0.1399E+04	.023698334	14291.3
10 155.00	0.1502E+04	.025440948	14873.5
11 150.00	0.1605E+04	.027197773	15499.8
12 145.00	0.1717E+04	.029079147	16175.0
13 140.00	0.1848E+04	.031314947	16904.9
14 135.00	0.2026E+04	.034326360	17696.1
15 130.00	0.2210E+04	.037432209	18556.3
16 125.00	0.2428E+04	.041134033	19494.7
17 120.00	0.2757E+04	.046705101	20521.7
18 115.00	0.3132E+04	.053050827	21650.2
19 110.00	0.3555E+04	.060226209	22895.1
20 105.00	0.3513E+04	.059512194	24274.7
21 100.00	0.3395E+04	.057513140	25811.0
22 95.00	0.3159E+04	.053522382	26475.5
23 90.00	0.2940E+04	.049807880	27194.4
24 85.00	0.2733E+04	.046301611	27975.7
25 80.00	0.2673E+04	.045285057	28829.0
26 75.00	0.3589E+04	.060800713	29765.9
27 70.00	0.3281E+04	.055577517	30801.2
28 65.00	0.7111E+03	.012046996	31953.4
29 60.00	0.9799E+02	.001660020	33246.3
30 55.00	0.8594E+01	.000145595	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1211E+04
0.2000E+00	0.1207E+04
0.3000E+00	0.1203E+04
0.4000E+00	0.1199E+04
0.5000E+00	0.1195E+04
0.6000E+00	0.1191E+04
0.7000E+00	0.1186E+04
0.8000E+00	0.1182E+04
0.9000E+00	0.1177E+04
0.1000E+01	0.1172E+04

0.1100E+01	0.1167E+04
0.1200E+01	0.1163E+04
0.1300E+01	0.1158E+04
0.1400E+01	0.1154E+04
0.1500E+01	0.1150E+04
0.1600E+01	0.1146E+04
0.1700E+01	0.1142E+04
0.1800E+01	0.1138E+04
0.1900E+01	0.1135E+04
0.2000E+01	0.1131E+04
0.2100E+01	0.1127E+04
0.2200E+01	0.1125E+04
0.2300E+01	0.1122E+04
0.2400E+01	0.1118E+04
0.2500E+01	0.1115E+04
0.2600E+01	0.1111E+04
0.2700E+01	0.1108E+04
0.2800E+01	0.1105E+04
0.2900E+01	0.1101E+04
0.3000E+01	0.1098E+04
0.3100E+01	0.1095E+04
0.3200E+01	0.1092E+04
0.3300E+01	0.1089E+04
0.3400E+01	0.1087E+04
0.3500E+01	0.1084E+04
0.3600E+01	0.1081E+04
0.3700E+01	0.1079E+04
0.3800E+01	0.1076E+04
0.3900E+01	0.1074E+04
0.4000E+01	0.1071E+04
0.4100E+01	0.1068E+04
0.4200E+01	0.1065E+04
0.4300E+01	0.1063E+04
0.4400E+01	0.1060E+04
0.4500E+01	0.1057E+04
0.4600E+01	0.1054E+04
0.4700E+01	0.1051E+04
0.4800E+01	0.1048E+04
0.4900E+01	0.1045E+04
0.5000E+01	0.1042E+04
0.5100E+01	0.1039E+04
0.5200E+01	0.1036E+04
0.5300E+01	0.1033E+04

TOTAL OF AZ= 0.5903E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 22

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
13.30	2.52	15.92	3.50	16.42	3.95	17.81	4.10	19.13	3.58		
20.58	3.16	22.25	2.94	23.83	3.04	25.34	3.35	26.78	3.30		
27.76	3.08	28.16	3.41	29.67	3.13	29.77	3.00	31.67	2.44		
33.58	3.38	35.41	5.50	37.17	8.20	38.86	10.80	40.76	13.50		
42.63	14.90	44.76	15.60								

THE TOTAL ACTIVATION IS 0.2857E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.2524E+05	.088347860	10794.0
2 195.00	0.2322E+05	.081259683	11143.3
3 190.00	0.2136E+05	.074776128	11513.3
4 185.00	0.1967E+05	.068844087	11906.1
5 180.00	0.1812E+05	.063415267	12323.5
6 175.00	0.1670E+05	.058445565	12768.0
7 170.00	0.1540E+05	.053895302	13242.1
8 165.00	0.1421E+05	.049727757	13748.7
9 160.00	0.1312E+05	.045903934	14291.3
10 155.00	0.1212E+05	.042411562	14873.5
11 150.00	0.1120E+05	.039204955	15493.8
12 145.00	0.1036E+05	.036264937	16175.0
13 140.00	0.9591E+04	.033568572	16904.9
14 135.00	0.8884E+04	.031094907	17696.1
15 130.00	0.8235E+04	.028824788	18555.3
16 125.00	0.7639E+04	.026738478	19494.7

17	120.00	0.7089E+04	.024811344	20521.7
18	115.00	0.6581E+04	.023032917	21650.2
19	110.00	0.6112E+04	.021393253	22895.1
20	105.00	0.5680E+04	.019882256	24274.7
21	100.00	0.5283E+04	.018489974	25811.0
22	95.00	0.4727E+04	.016546585	26475.5
23	90.00	0.4227E+04	.014794928	27194.4
24	85.00	0.3772E+04	.013201360	27975.7
25	80.00	0.3331E+04	.011659831	28829.0
26	75.00	0.1627E+04	.005693895	29765.9
27	70.00	0.7080E+03	.002478177	30801.2
28	65.00	0.7976E+03	.002791621	31953.4
29	60.00	0.6047E+03	.002116416	33246.3
30	55.00	0.1080E+03	.000377841	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.5831E+04		
0.2000E+00		0.5813E+04		
0.3000E+00		0.5795E+04		
0.4000E+00		0.5777E+04		
0.5000E+00		0.5760E+04		
0.6000E+00		0.5742E+04		
0.7000E+00		0.5724E+04		
0.8000E+00		0.5706E+04		
0.9000E+00		0.5688E+04		
0.1000E+01		0.5671E+04		
0.1100E+01		0.5654E+04		
0.1200E+01		0.5636E+04		
0.1300E+01		0.5619E+04		
0.1400E+01		0.5602E+04		
0.1500E+01		0.5585E+04		
0.1600E+01		0.5568E+04		
0.1700E+01		0.5551E+04		
0.1800E+01		0.5534E+04		
0.1900E+01		0.5517E+04		
0.2000E+01		0.5497E+04		
0.2100E+01		0.5480E+04		
0.2200E+01		0.5464E+04		
0.2300E+01		0.5448E+04		
0.2400E+01		0.5431E+04		
0.2500E+01		0.5415E+04		
0.2600E+01		0.5399E+04		
0.2700E+01		0.5382E+04		
0.2800E+01		0.5366E+04		
0.2900E+01		0.5350E+04		
0.3000E+01		0.5334E+04		
0.3100E+01		0.5318E+04		
0.3200E+01		0.5302E+04		
0.3300E+01		0.5286E+04		
0.3400E+01		0.5271E+04		
0.3500E+01		0.5255E+04		
0.3600E+01		0.5239E+04		
0.3700E+01		0.5223E+04		
0.3800E+01		0.5207E+04		
0.3900E+01		0.5191E+04		
0.4000E+01		0.5175E+04		
0.4100E+01		0.5160E+04		
0.4200E+01		0.5144E+04		
0.4300E+01		0.5129E+04		
0.4400E+01		0.5114E+04		
0.4500E+01		0.5099E+04		
0.4600E+01		0.5083E+04		

0.4700E+01 0.5068E+04
 0.4800E+01 0.5053E+04
 0.4900E+01 0.5038E+04
 0.5000E+01 0.5023E+04
 0.5100E+01 0.5008E+04
 0.5200E+01 0.4993E+04
 0.5300E+01 0.4978E+04
 TOTAL OF AZ= 0.2857E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 6
 REACTION 4P2N PRODUCT K43 Q-VALUE= 29.40 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 35.41 0.05 37.17 0.08 38.86 0.14 40.78 0.27 42.63 0.46
 44.76 0.74

THE TOTAL ACTIVATION IS 0.1815E+16 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1248E+16	.687513471	10794.0
2 195.00	0.3904E+15	.215116605	11143.3
3 190.00	0.1218E+15	.067123458	11513.3
4 185.00	0.3790E+14	.020882409	11906.1
5 180.00	0.1175E+14	.006475622	12323.5
6 175.00	0.3632E+13	.002000969	12768.0
7 170.00	0.1118E+13	.000615941	13242.1
8 165.00	0.3427E+12	.000188804	13748.7
9 160.00	0.1046E+12	.000057610	14291.3
10 155.00	0.3175E+11	.000017491	14873.5
11 150.00	0.9585E+10	.000005281	15499.8
12 145.00	0.2876E+10	.000001585	16175.0
13 140.00	0.8573E+09	.000000472	16904.9
14 135.00	0.2536E+09	.000000140	17696.1
15 130.00	0.7440E+08	.000000041	18556.3
16 125.00	0.2162E+08	.000000012	19494.7
17 120.00	0.6213E+07	.000000003	20521.7
18 115.00	0.1764E+07	.000000001	21650.2
19 110.00	0.4936E+06	.000000000	22895.1
20 105.00	0.1360E+06	.000000000	24274.7
21 100.00	0.3677E+05	.000000000	25811.0
22 95.00	0.9359E+04	.000000000	26475.5
23 90.00	0.2319E+04	.000000000	27194.4
24 85.00	0.5559E+03	.000000000	27975.7
25 80.00	0.1267E+03	.000000000	28829.0
26 75.00	0.1684E+02	.000000000	29765.9
27 70.00	0.1640E+01	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.4226E+14
0.2000E+00	0.4191E+14
0.3000E+00	0.4156E+14
0.4000E+00	0.4121E+14
0.5000E+00	0.4087E+14
0.6000E+00	0.4052E+14
0.7000E+00	0.4018E+14
0.8000E+00	0.3985E+14
0.9000E+00	0.3952E+14
0.1000E+01	0.3918E+14
0.1100E+01	0.3886E+14
0.1200E+01	0.3853E+14
0.1300E+01	0.3821E+14

0.1400E+01	0.3789E+14
0.1500E+01	0.3757E+14
0.1600E+01	0.3726E+14
0.1700E+01	0.3695E+14
0.1800E+01	0.3664E+14
0.1900E+01	0.3633E+14
0.2000E+01	0.3603E+14
0.2100E+01	0.3572E+14
0.2200E+01	0.3543E+14
0.2300E+01	0.3513E+14
0.2400E+01	0.3483E+14
0.2500E+01	0.3454E+14
0.2600E+01	0.3425E+14
0.2700E+01	0.3397E+14
0.2800E+01	0.3368E+14
0.2900E+01	0.3340E+14
0.3000E+01	0.3312E+14
0.3100E+01	0.3284E+14
0.3200E+01	0.3257E+14
0.3300E+01	0.3229E+14
0.3400E+01	0.3202E+14
0.3500E+01	0.3175E+14
0.3600E+01	0.3149E+14
0.3700E+01	0.3122E+14
0.3800E+01	0.3096E+14
0.3900E+01	0.3070E+14
0.4000E+01	0.3045E+14
0.4100E+01	0.3019E+14
0.4200E+01	0.2994E+14
0.4300E+01	0.2969E+14
0.4400E+01	0.2944E+14
0.4500E+01	0.2919E+14
0.4600E+01	0.2894E+14
0.4700E+01	0.2870E+14
0.4800E+01	0.2846E+14
0.4900E+01	0.2822E+14
0.5000E+01	0.2798E+14
0.5100E+01	0.2775E+14
0.5200E+01	0.2752E+14
0.5300E+01	0.2729E+14

TOTAL OF AZ= 0.1815E+16
 PHYLAIRD job terminated at 29-MAY-1991 12:05:30.96

Accounting information:

Buffered I/O count:	90	Peak working set size:	479
Direct I/O count:	151	Peak page file size:	2527
Page faults:	678	Mounted volumes:	0
Charged CPU time:	0 00:00:03.92	Elapsed time:	0 00:00:24.03

\$RUN PTRAP4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PTID

THE TARGET IS TI
 TM,C, AND A ARE 47.900 14.000 8.300
 NCM= 10 NQM= 2 NMC= 3
 THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.400
 THICKNESS OF COVERING MATERIAL 0.00
 THE INELASTIC XSECTIONS FOR COVERING
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
 60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
 THE INELASTIC XSECTIONS OF THE TARGET
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 20.00 1611.00 25.00 1617.00 30.00 1649.00 35.00 1703.00 40.00 1740.00
 50.00 1748.00 60.00 1776.00 100.00 1662.00 225.00 1600.00 340.00 1626.00
 TARGET THICKNESS 5.271 GM/CM**2 WIDTH 5.080 CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 89.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 6
 THE NUMBER OF REACTIONS EQUAL 6
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15
 MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
 1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
 3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
 30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
 THE NUMBER OF CROSS SECTION DATA POINTS IS 46
 REACTION PRODUCT V48 Q-VALUE= 4.80 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 4.80 0.01 4.90 1.50 5.23 23.00 5.54 118.00 6.30 300.00
 13.30 389.00 15.92 359.00 16.42 249.00 17.81 168.00 19.13 117.00
 20.58 86.90 22.25 69.90 23.83 56.10 25.34 48.10 26.78 42.90
 27.76 38.80 28.16 38.50 29.67 36.00 29.77 35.30 31.67 33.00
 33.58 31.40 35.41 29.70 37.17 27.90 38.86 26.10 40.78 24.00
 42.63 21.60 44.76 19.50 80.80 9.30 90.90 7.73 100.40 6.57
 109.40 5.83 117.90 5.21 126.40 4.95 134.60 4.63 142.50 4.34
 150.10 4.05 156.00 3.63 162.00 3.54 167.30 3.13 168.00 3.36
 173.70 3.25 179.30 3.06 184.90 2.94 190.30 2.87 195.50 2.72
 200.70 2.36

THE TOTAL ACTIVATION IS 0.3262E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6622E+03	.002029951	10794.0
2 195.00	0.7174E+03	.002199066	11143.3
3 190.00	0.7711E+03	.002363628	11513.3
4 185.00	0.8163E+03	.002502345	11906.1
5 180.00	0.9075E+03	.002781724	12323.5
6 175.00	0.9932E+03	.003044530	12768.0
7 170.00	0.1110E+04	.003402718	13242.1
8 165.00	0.1213E+04	.003718912	13748.7
9 160.00	0.1326E+04	.004065932	14291.3
10 155.00	0.1455E+04	.004459769	14873.5
11 150.00	0.1604E+04	.004915879	15499.8
12 145.00	0.1782E+04	.005461499	16175.0
13 140.00	0.2011E+04	.006164636	16904.9
14 135.00	0.2380E+04	.007295832	17696.1
15 130.00	0.3042E+04	.009325641	18556.3
16 125.00	0.3574E+04	.010956585	19494.7
17 120.00	0.4241E+04	.013000756	20521.7
18 115.00	0.5055E+04	.015494540	21650.2
19 110.00	0.6048E+04	.018539889	22895.1
20 105.00	0.7272E+04	.022291008	24274.7
21 100.00	0.8750E+04	.026822757	25811.0
22 95.00	0.1013E+05	.031054320	26475.5
23 90.00	0.1172E+05	.035940718	27194.4
24 85.00	0.1369E+05	.041967679	27975.7
25 80.00	0.1660E+05	.050877504	28829.0
26 75.00	0.2571E+05	.078821108	29765.9
27 70.00	0.3275E+05	.100391261	30801.2
28 65.00	0.5706E+05	.174923316	31953.4

29	60.00	0.8278E+05	.253745973	33246.3
30	55.00	0.2004E+05	.061440416	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH
GRAMS/SQ CM
ACTIVATION
NUCLEI/DAY

0.1000E+00	0.1614E+05
0.2000E+00	0.1459E+05
0.3000E+00	0.1479E+05
0.4000E+00	0.1137E+05
0.5000E+00	0.1241E+05
0.6000E+00	0.1191E+05
0.7000E+00	0.9767E+04
0.8000E+00	0.1068E+05
0.9000E+00	0.8838E+04
0.1000E+01	0.8561E+04
0.1100E+01	0.1022E+05
0.1200E+01	0.6409E+04
0.1300E+01	0.7507E+04
0.1400E+01	0.7934E+04
0.1500E+01	0.5538E+04
0.1600E+01	0.6941E+04
0.1700E+01	0.6853E+04
0.1800E+01	0.6486E+04
0.1900E+01	0.5216E+04
0.2000E+01	0.6132E+04
0.2100E+01	0.6660E+04
0.2200E+01	0.4794E+04
0.2300E+01	0.5134E+04
0.2400E+01	0.5414E+04
0.2500E+01	0.4412E+04
0.2600E+01	0.4999E+04
0.2700E+01	0.4876E+04
0.2800E+01	0.4529E+04
0.2900E+01	0.4869E+04
0.3000E+01	0.4341E+04
0.3100E+01	0.4887E+04
0.3200E+01	0.4762E+04
0.3300E+01	0.4163E+04
0.3400E+01	0.4353E+04
0.3500E+01	0.4281E+04
0.3600E+01	0.4519E+04
0.3700E+01	0.4173E+04
0.3800E+01	0.3843E+04
0.3900E+01	0.3623E+04
0.4000E+01	0.3736E+04
0.4100E+01	0.3447E+04
0.4200E+01	0.3997E+04
0.4300E+01	0.3027E+04
0.4400E+01	0.3622E+04
0.4500E+01	0.3586E+04
0.4600E+01	0.3302E+04
0.4700E+01	0.3371E+04
0.4800E+01	0.3576E+04
0.4900E+01	0.3589E+04
0.5000E+01	0.3389E+04
0.5100E+01	0.3228E+04
0.5200E+01	0.3763E+04
0.5300E+01	0.3183E+04

TOTAL OF AZ= 0.3257E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 41
 REACTION 2P PRODUCT SC47 Q-VALUE= 11.40 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 13.30 0.55 15.92 0.80 16.42 1.21 17.81 2.02 19.13 3.53

20.58	5.85	22.25	8.66	23.83	11.40	25.34	13.80	26.78	16.30
27.76	18.10	28.16	18.70	29.67	21.40	29.77	21.30	31.67	23.00
33.58	22.50	35.41	21.20	37.17	20.10	38.86	19.40	40.78	18.80
42.63	18.40	44.76	18.10	80.80	21.30	90.90	20.80	100.40	20.10
109.40	23.30	117.90	20.10	126.40	20.30	134.60	20.50	142.50	20.40
150.10	20.40	156.00	20.20	162.00	19.90	167.30	19.70	168.00	20.10
173.70	20.10	179.30	19.80	184.90	19.60	190.30	19.80	195.50	19.70
200.70	19.60								

THE TOTAL ACTIVATION IS 0.1817E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.4179E+04	.022997310
2	195.00	0.4351E+04	.023944175
3	190.00	0.4505E+04	.024790496
4	185.00	0.4620E+04	.025423413
5	180.00	0.4829E+04	.026572816
6	175.00	0.5047E+04	.027773667
7	170.00	0.5256E+04	.028924532
8	165.00	0.5457E+04	.030030694
9	160.00	0.5680E+04	.031256713
10	155.00	0.5904E+04	.032485683
11	150.00	0.6125E+04	.033701882
12	145.00	0.6386E+04	.035140507
13	140.00	0.6862E+04	.037758403
14	135.00	0.7472E+04	.041115478
15	130.00	0.7401E+04	.040725883
16	125.00	0.7455E+04	.041021474
17	120.00	0.7858E+04	.043243434
18	115.00	0.8236E+04	.045319300
19	110.00	0.8551E+04	.047056839
20	105.00	0.8683E+04	.047779262
21	100.00	0.8781E+04	.048321452
22	95.00	0.8527E+04	.046919633
23	90.00	0.8249E+04	.045392055
24	85.00	0.8018E+04	.044120990
25	80.00	0.7855E+04	.043223374
26	75.00	0.7723E+04	.042499308
27	70.00	0.5805E+04	.031944044
28	65.00	0.1791E+04	.009853614
29	60.00	0.1206E+03	.000663459
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36330.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.7288E+04
0.2000E+00	0.7191E+04
0.3000E+00	0.7191E+04
0.4000E+00	0.6214E+04
0.5000E+00	0.6407E+04
0.6000E+00	0.5997E+04
0.7000E+00	0.5793E+04
0.8000E+00	0.5182E+04
0.9000E+00	0.5192E+04
0.1000E+01	0.4701E+04
0.1100E+01	0.5032E+04
0.1200E+01	0.4225E+04
0.1300E+01	0.4487E+04
0.1400E+01	0.4285E+04
0.1500E+01	0.3756E+04
0.1600E+01	0.4169E+04
0.1700E+01	0.3536E+04
0.1800E+01	0.3859E+04

0.1900E+01	0.3301E+04
0.2000E+01	0.3185E+04
0.2100E+01	0.3548E+04
0.2200E+01	0.3161E+04
0.2300E+01	0.3053E+04
0.2400E+01	0.2970E+04
0.2500E+01	0.2892E+04
0.2600E+01	0.3199E+04
0.2700E+01	0.2885E+04
0.2800E+01	0.2401E+04
0.2900E+01	0.2807E+04
0.3000E+01	0.2578E+04
0.3100E+01	0.2717E+04
0.3200E+01	0.2475E+04
0.3300E+01	0.2460E+04
0.3400E+01	0.2551E+04
0.3500E+01	0.2363E+04
0.3600E+01	0.2315E+04
0.3700E+01	0.2320E+04
0.3800E+01	0.2255E+04
0.3900E+01	0.2373E+04
0.4000E+01	0.2200E+04
0.4100E+01	0.2134E+04
0.4200E+01	0.2458E+04
0.4300E+01	0.1930E+04
0.4400E+01	0.2236E+04
0.4500E+01	0.2032E+04
0.4600E+01	0.2038E+04
0.4700E+01	0.2045E+04
0.4800E+01	0.2094E+04
0.4900E+01	0.1997E+04
0.5000E+01	0.1920E+04
0.5100E+01	0.1950E+04
0.5200E+01	0.2191E+04
0.5300E+01	0.1878E+04

TOTAL OF AZ= 0.1814E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 41

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	10.50 MEV
13.30	1.26	15.92	1.76	16.42	2.14	17.81	3.16	19.13	4.04
20.58	4.76	22.25	6.00	23.83	7.40	25.34	8.40	26.78	9.60
27.76	10.10	28.16	10.40	29.67	12.40	29.77	12.50	31.67	18.10
33.58	27.30	35.41	36.80	37.17	46.10	38.86	54.10	40.78	61.80
42.63	64.20	44.76	66.10	80.80	44.00	90.90	40.30	100.40	38.50
109.40	36.70	117.90	35.20	126.40	34.70	134.60	34.00	142.50	33.60
150.10	32.50	156.00	31.90	162.00	31.60	167.30	31.00	168.00	30.80
173.70	30.90	179.30	30.20	184.90	30.00	190.30	30.10	195.50	29.60
200.70	29.60								

THE TOTAL ACTIVATION IS 0.3646E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6423E+04	.017617647	10794.0
2 195.00	0.6725E+04	.018446617	11143.3
3 190.00	0.7011E+04	.019229196	11513.3
4 185.00	0.7346E+04	.020148337	11906.1
5 180.00	0.7712E+04	.021153158	12323.5
6 175.00	0.8095E+04	.022202695	12768.0
7 170.00	0.8547E+04	.023444073	13242.1
8 165.00	0.9048E+04	.024818154	13748.7
9 160.00	0.9521E+04	.026115108	14291.3
10 155.00	0.1004E+05	.027536172	14873.5
11 150.00	0.1063E+05	.029158497	15499.8
12 145.00	0.1128E+05	.030950954	16175.0
13 140.00	0.1208E+05	.033120975	16904.9
14 135.00	0.1296E+05	.0355551205	17696.1
15 130.00	0.1392E+05	.038173784	18556.3
16 125.00	0.1494E+05	.040990986	19494.7
17 120.00	0.1606E+05	.044063337	20521.7
18 115.00	0.1743E+05	.047800418	21650.2
19 110.00	0.1899E+05	.052089758	22895.1
20 105.00	0.2079E+05	.057029754	24274.7

21	100.00	0.2271E+05	.0622279299	25811.0
22	95.00	0.2376E+05	.065177239	26475.5
23	90.00	0.2468E+05	.067696460	27194.4
24	85.00	0.2462E+05	.067534037	27975.7
25	80.00	0.2170E+05	.059524924	28829.0
26	75.00	0.1207E+05	.033107594	23765.9
27	70.00	0.3767E+04	.010332682	30801.2
28	65.00	0.1452E+04	.003982720	31953.4
29	60.00	0.2641E+03	.000724309	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.1460E+05		
0.2000E+00		0.1444E+05		
0.3000E+00		0.1441E+05		
0.4000E+00		0.1247E+05		
0.5000E+00		0.1287E+05		
0.6000E+00		0.1201E+05		
0.7000E+00		0.1164E+05		
0.8000E+00		0.1040E+05		
0.9000E+00		0.1040E+05		
0.1000E+01		0.9446E+04		
0.1100E+01		0.1010E+05		
0.1200E+01		0.8461E+04		
0.1300E+01		0.8995E+04		
0.1400E+01		0.8605E+04		
0.1500E+01		0.7522E+04		
0.1600E+01		0.8346E+04		
0.1700E+01		0.7080E+04		
0.1800E+01		0.7727E+04		
0.1900E+01		0.6601E+04		
0.2000E+01		0.6375E+04		
0.2100E+01		0.7109E+04		
0.2200E+01		0.6334E+04		
0.2300E+01		0.6112E+04		
0.2400E+01		0.5951E+04		
0.2500E+01		0.5806E+04		
0.2600E+01		0.6421E+04		
0.2700E+01		0.5788E+04		
0.2800E+01		0.4813E+04		
0.2900E+01		0.5634E+04		
0.3000E+01		0.5178E+04		
0.3100E+01		0.5449E+04		
0.3200E+01		0.4961E+04		
0.3300E+01		0.4936E+04		
0.3400E+01		0.5123E+04		
0.3500E+01		0.4738E+04		
0.3600E+01		0.4640E+04		
0.3700E+01		0.4656E+04		
0.3800E+01		0.4528E+04		
0.3900E+01		0.4767E+04		
0.4000E+01		0.4415E+04		
0.4100E+01		0.4286E+04		
0.4200E+01		0.4945E+04		
0.4300E+01		0.3887E+04		
0.4400E+01		0.4498E+04		
0.4500E+01		0.4083E+04		
0.4600E+01		0.4100E+04		
0.4700E+01		0.4116E+04		
0.4800E+01		0.4214E+04		
0.4900E+01		0.4013E+04		
0.5000E+01		0.3857E+04		

0.5100E+01
 0.5200E+01
 0.5300E+01
 0.3640E+06
 0.3922E+04
 0.4400E+04
 0.3773E+04
 TOTAL OF AZ= 0.3640E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 41
 REACTION 2P3N PRODUCT SC44M Q-VALUE= 2.19 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 13.30 0.35 15.92 0.62 16.42 0.98 17.81 1.23 19.13 1.30
 20.58 1.24 22.25 2.67 23.83 6.10 25.34 9.00 26.78 11.10
 27.76 12.40 28.16 12.90 29.67 15.00 29.77 14.90 31.67 16.70
 33.58 17.00 35.41 16.70 37.17 15.30 38.86 14.40 40.78 13.30
 42.63 12.20 44.76 11.70 80.80 20.30 90.90 17.90 100.40 15.80
 109.40 14.90 117.90 13.90 126.40 13.40 134.60 12.90 142.50 12.30
 150.10 11.90 156.00 12.10 162.00 11.70 167.30 11.00 168.00 11.40
 173.70 11.20 179.30 10.70 184.90 10.40 190.30 10.50 195.50 10.30
 200.70 10.20

THE TOTAL ACTIVATION IS 0.1301E+06 NUCLEI /DAY
 PROTON ENERGY MEV PARTIAL ACTIVATION FRACTIONAL ACTIVATION PROTON FLUX
 1 200.00 0.2286E+04 .017572062 10794.0
 2 195.00 0.2436E+04 .018724367 11143.3
 3 190.00 0.2573E+04 .019777885 11513.3
 4 185.00 0.2685E+04 .020640714 11906.1
 5 180.00 0.2886E+04 .022181515 12323.5
 6 175.00 0.3036E+04 .023333941 12768.0
 7 170.00 0.3169E+04 .024356985 13242.1
 8 165.00 0.3381E+04 .025985662 13748.7
 9 160.00 0.3629E+04 .027890865 14291.3
 10 155.00 0.3891E+04 .029909991 14873.5
 11 150.00 0.4164E+04 .032001566 15499.8
 12 145.00 0.4458E+04 .034267582 16175.0
 13 140.00 0.4811E+04 .036976404 16904.9
 14 135.00 0.5223E+04 .040146876 17696.1
 15 130.00 0.5630E+04 .043270588 18556.3
 16 125.00 0.6110E+04 .046961080 19494.7
 17 120.00 0.6700E+04 .051496942 20521.7
 18 115.00 0.7275E+04 .055917885 21650.2
 19 110.00 0.7670E+04 .058948860 22895.1
 20 105.00 0.7390E+04 .056801435 24274.7
 21 100.00 0.7038E+04 .054098096 25811.0
 22 95.00 0.6442E+04 .049510263 26475.5
 23 90.00 0.5887E+04 .045251273 27194.4
 24 85.00 0.5501E+04 .042277142 27975.7
 25 80.00 0.5412E+04 .041599285 28829.0
 26 75.00 0.5688E+04 .043720461 29765.9
 27 70.00 0.3864E+04 .029701827 30801.2
 28 65.00 0.7613E+03 .005851243 31953.4
 29 60.00 0.9903E+02 .000761147 33246.3
 30 55.00 0.8594E+01 .000066056 34711.2
 31 50.00 0.0000E+00 .000000000 36390.0
 32 45.00 0.0000E+00 .000000000 37815.7
 33 40.00 0.0000E+00 .000000000 39475.7
 34 35.00 0.0000E+00 .000000000 41445.9
 35 30.00 0.0000E+00 .000000000 43843.0
 36 25.00 0.0000E+00 .000000000 47588.0
 37 20.00 0.0000E+00 .000000000 52609.5
 38 15.00 0.0000E+00 .000000000 59873.0
 39 10.00 0.0000E+00 .000000000 86539.0
 40 5.00 0.0000E+00 .000000000 111493.4
 DEPTH GRAMS/SQ CM ACTIVATION NUCLEI/DAY
 0.1000E+00 0.5205E+04
 0.2000E+00 0.5155E+04
 0.3000E+00 0.5140E+04
 0.4000E+00 0.4439E+04
 0.5000E+00 0.4593E+04
 0.6000E+00 0.4275E+04
 0.7000E+00 0.4146E+04
 0.8000E+00 0.3706E+04
 0.9000E+00 0.3701E+04
 0.1000E+01 0.3372E+04

0.1100E+01	0.3601E+04
0.1200E+01	0.3012E+04
0.1300E+01	0.3212E+04
0.1400E+01	0.3070E+04
0.1500E+01	0.2677E+04
0.1600E+01	0.2982E+04
0.1700E+01	0.2531E+04
0.1800E+01	0.2752E+04
0.1900E+01	0.2354E+04
0.2000E+01	0.2281E+04
0.2100E+01	0.2536E+04
0.2200E+01	0.2255E+04
0.2300E+01	0.2185E+04
0.2400E+01	0.2130E+04
0.2500E+01	0.2075E+04
0.2600E+01	0.2289E+04
0.2700E+01	0.2072E+04
0.2800E+01	0.1725E+04
0.2900E+01	0.2015E+04
0.3000E+01	0.1848E+04
0.3100E+01	0.1949E+04
0.3200E+01	0.1775E+04
0.3300E+01	0.1763E+04
0.3400E+01	0.1826E+04
0.3500E+01	0.1692E+04
0.3600E+01	0.1659E+04
0.3700E+01	0.1663E+04
0.3800E+01	0.1614E+04
0.3900E+01	0.1702E+04
0.4000E+01	0.1579E+04
0.4100E+01	0.1533E+04
0.4200E+01	0.1766E+04
0.4300E+01	0.1388E+04
0.4400E+01	0.1608E+04
0.4500E+01	0.1461E+04
0.4600E+01	0.1466E+04
0.4700E+01	0.1471E+04
0.4800E+01	0.1505E+04
0.4900E+01	0.1434E+04
0.5000E+01	0.1379E+04
0.5100E+01	0.1402E+04
0.5200E+01	0.1569E+04
0.5300E+01	0.1345E+04

TOTAL OF AZ= 0.1299E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 22

REACTION	2P4N	PRODUCT	SC43	Q-VALUE=	3.01 MEV
MEV	MBS	MEV	MBS	MEV	MBS
13.30	2.52	15.92	3.50	16.42	3.95
20.58	3.16	22.25	2.94	23.83	3.04
27.76	3.08	28.16	3.41	29.67	3.13
33.58	3.38	35.41	5.50	37.17	8.20
42.63	14.90	44.76	15.60		

THE TOTAL ACTIVATION IS 0.6189E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION
MEV	NUCLEI PER DAY	
1 200.00	0.5733E+05	.092636831
2 195.00	0.5260E+05	.084984273
3 190.00	0.4827E+05	.077992074
4 185.00	0.4431E+05	.071601510
5 180.00	0.4070E+05	.065758884
6 175.00	0.3739E+05	.060415193
7 170.00	0.3436E+05	.055524573
8 165.00	0.3159E+05	.0510444188
9 160.00	0.2905E+05	.046937175
10 155.00	0.2672E+05	.043169830
11 150.00	0.2458E+05	.039711311
12 145.00	0.2261E+05	.036536790
13 140.00	0.2080E+05	.033615429
14 135.00	0.1913E+05	.030911282
15 130.00	0.1758E+05	.028411865
16 125.00	0.1615E+05	.026093759

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7

DEPTH
GRAMS/SQ CM

0.1000E+00
0.2000E+00
0.3000E+00
0.4000E+00
0.5000E+00
0.6000E+00
0.7000E+00
0.8000E+00
0.9000E+00
0.1000E+01
0.1100E+01
0.1200E+01
0.1300E+01
0.1400E+01
0.1500E+01
0.1600E+01
0.1700E+01
0.1800E+01
0.1900E+01
0.2000E+01
0.2100E+01
0.2200E+01
0.2300E+01
0.2400E+01
0.2500E+01
0.2600E+01
0.2700E+01
0.2800E+01
0.2900E+01
0.3000E+01
0.3100E+01
0.3200E+01
0.3300E+01
0.3400E+01
0.3500E+01
0.3600E+01
0.3700E+01
0.3800E+01
0.3900E+01
0.4000E+01
0.4100E+01
0.4200E+01
0.4300E+01
0.4400E+01
0.4500E+01
0.4600E+01

ACTIVATION
NUCLEI/DAY

0.2517E+05
0.2489E+05
0.2482E+05
0.2149E+05
0.2213E+05
0.2064E+05
0.1997E+05
0.1779E+05
0.1779E+05
0.1612E+05
0.1721E+05
0.1438E+05
0.1529E+05
0.1458E+05
0.1272E+05
0.1415E+05
0.1195E+05
0.1305E+05
0.1112E+05
0.1073E+05
0.1200E+05
0.1064E+05
0.1028E+05
0.1001E+05
0.9742E+04
0.1080E+05
0.9738E+04
0.8052E+04
0.9469E+04
0.8677E+04
0.9160E+04
0.8330E+04
0.8277E+04
0.8660E+04
0.7966E+04
0.7798E+04
0.7829E+04
0.7619E+04
0.8031E+04
0.7434E+04
0.7217E+04
0.8350E+04
0.5532E+04
0.7601E+04
0.6884E+04
0.6917E+04

[illegible]

20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

0.4700E+01 0.6951E+04
 0.4800E+01 0.7117E+04
 0.4900E+01 0.6782E+04
 0.5000E+01 0.6517E+04
 0.5100E+01 0.6633E+04
 0.5200E+01 0.7458E+04
 0.5300E+01 0.6410E+04
 TOTAL OF AZ= 0.6178E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 6
 REACTION 4P2N PRODUCT R43 Q-VALUE= 29.40 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 35.41 0.05 37.17 0.08 38.86 0.14 40.78 0.27 42.63 0.46
 44.76 0.74

THE TOTAL ACTIVATION IS 0.2822E+16 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1945E+16	.689158916	10794.0
2 195.00	0.6054E+15	.214512303	11143.3
3 190.00	0.1879E+15	.066575140	11513.3
4 185.00	0.5812E+14	.020596361	11906.1
5 180.00	0.1792E+14	.006349930	12323.5
6 175.00	0.5504E+13	.001950319	12768.0
7 170.00	0.1684E+13	.000596583	13242.1
8 165.00	0.5127E+12	.000181673	13748.7
9 160.00	0.1554E+12	.000055054	14291.3
10 155.00	0.4683E+11	.000016595	14873.5
11 150.00	0.1403E+11	.000004973	15499.8
12 145.00	0.4178E+10	.000001480	16175.0
13 140.00	0.1235E+10	.000000438	16904.9
14 135.00	0.3620E+09	.000000128	17696.1
15 130.00	0.1052E+09	.000000037	18556.3
16 125.00	0.3025E+08	.000000011	19494.7
17 120.00	0.8596E+07	.000000003	20521.7
18 115.00	0.2411E+07	.000000001	21650.2
19 110.00	0.6661E+06	.000000000	22895.1
20 105.00	0.1809E+06	.000000000	24274.7
21 100.00	0.4817E+05	.000000000	25811.0
22 95.00	0.1206E+05	.000000000	26475.5
23 90.00	0.2931E+04	.000000000	27194.4
24 85.00	0.6849E+03	.000000000	27975.7
25 80.00	0.1462E+03	.000000000	28829.0
26 75.00	0.1873E+02	.000000000	29765.9
27 70.00	0.1640E+01	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1737E+15
0.2000E+00	0.1556E+15
0.3000E+00	0.1447E+15
0.4000E+00	0.1120E+15
0.5000E+00	0.1108E+15
0.6000E+00	0.9908E+14
0.7000E+00	0.9029E+14
0.8000E+00	0.7523E+14
0.9000E+00	0.7612E+14
0.1000E+01	0.6453E+14
0.1100E+01	0.7282E+14
0.1200E+01	0.5608E+14
0.1300E+01	0.6288E+14

0.1400E+01	0.5863E+14
0.1500E+01	0.5006E+14
0.1600E+01	0.5880E+14
0.1700E+01	0.4695E+14
0.1800E+01	0.5514E+14
0.1900E+01	0.4437E+14
0.2000E+01	0.4294E+14
0.2100E+01	0.5208E+14
0.2200E+01	0.4440E+14
0.2300E+01	0.4254E+14
0.2400E+01	0.4283E+14
0.2500E+01	0.4082E+14
0.2600E+01	0.4910E+14
0.2700E+01	0.4190E+14
0.2800E+01	0.3360E+14
0.2900E+01	0.4216E+14
0.3000E+01	0.3706E+14
0.3100E+01	0.4070E+14
0.3200E+01	0.3619E+14
0.3300E+01	0.3611E+14
0.3400E+01	0.3767E+14
0.3500E+01	0.3487E+14
0.3600E+01	0.3359E+14
0.3700E+01	0.3481E+14
0.3800E+01	0.3320E+14
0.3900E+01	0.3530E+14
0.4000E+01	0.3212E+14
0.4100E+01	0.3059E+14
0.4200E+01	0.3711E+14
0.4300E+01	0.2702E+14
0.4400E+01	0.3294E+14
0.4500E+01	0.2861E+14
0.4600E+01	0.2914E+14
0.4700E+01	0.3022E+14
0.4800E+01	0.2903E+14
0.4900E+01	0.2875E+14
0.5000E+01	0.2541E+14
0.5100E+01	0.2770E+14
0.5200E+01	0.3100E+14
0.5300E+01	0.2611E+14

TOTAL OF AZ= 0.2816E+16
 PHYLAIRD job terminated at 29-MAY-1991 14:01:25.49

Accounting information:			
Buffered I/O count:	93	Peak working set size:	483
Direct I/O count:	154	Peak page file size:	2527
Page faults:	783	Mounted volumes:	0
Charged CPU time:	0 00:01:02.77	Elapsed time:	0 00:03:28.44

\$run ptrap4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PFED

```

    THE TARGET IS          FE
    TM,C,AND A ARE        55.847  148.000  3.000
    NCM= 10  NQM= 2  NMC= 3
    THE COVERING MATERIAL IS ALUM
    TC,CC, AND AC ARE      27.000  184.000  5.400
    THICKNESS OF COVERING MATERIAL  5.00
    THE INELASTIC XSECTIONS FOR COVERING
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
    60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
    THE INELASTIC XSECTIONS OF THE TARGET
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
    50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
    TARGET THICKNESS  5.271 GM/CM**2  WIDTH  5.080CM  LENGTH  5.080 CM
    INITIAL THETA  0.0  FINAL THETA  0.0  INCREMENT 11.0
    INITIAL PHI  0.0  FINAL PHI  0.0  INCREMENT 1.0
    200.00  5.00  5.00  0.100  8
    THE NUMBER OF REACTIONS EQUAL  8
    THE NUMBER OF PROTON FLUX DATA POINTS IS 15
    MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
    1.0  211010.0  1.5  129570.0  2.0  120000.0  2.5  120000.0  3.0  113220.0
    3.7  113180.0  4.5  113430.0  6.0  108220.0  10.0  86539.0  15.0  59873.0
    30.0  43843.0  50.0  36390.0  100.0  25811.0  200.0  10794.0  300.0  4017.6
    THE NUMBER OF CROSS SECTION DATA POINTS IS 37
    REACTION  PRODUCT  CO57  Q-VALUE=  1.60 MEV
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    13.43  7.64  15.18  5.05  16.79  3.92  18.28  3.41  20.22  2.57
    22.05  2.31  23.75  1.87  25.77  1.50  27.04  1.38  27.68  1.17
    29.19  1.04  29.66  0.88  31.22  0.83  33.23  0.66  35.14  0.60
    38.75  0.50  42.67  0.41  44.50  0.36  79.00  0.34  89.20  0.30
    98.90  0.26  108.00  0.25  116.50  0.23  125.10  0.22  133.40  0.21
    141.30  0.20  148.90  0.21  154.90  0.19  160.90  0.18  166.20  0.14
    166.90  0.18  172.70  0.17  178.40  0.17  183.90  0.16  189.30  0.16
    194.50  0.15  199.80  0.14
    THE TOTAL ACTIVATION IS  0.6492E+04 NUCLEI /DAY
    PROTON  PARTIAL  FRACTIONAL  PROTON
    ENERGY  ACTIVATION  ACTIVATION  FLUX
    MEV  NUCLEI PER DAY
    1  200.00  0.1238E+02  .001906543  10794.0
    2  195.00  0.1261E+02  .001941756  11143.3
    3  190.00  0.1338E+02  .002061685  11513.3
    4  185.00  0.1443E+02  .002223181  11906.1
    5  180.00  0.1624E+02  .002501510  12323.5
    6  175.00  0.1732E+02  .002668450  12768.0
    7  170.00  0.1832E+02  .002821734  13242.1
    8  165.00  0.1924E+02  .002963716  13748.7
    9  160.00  0.2058E+02  .003170197  14291.3
    10  155.00  0.2214E+02  .003410895  14873.5
    11  150.00  0.2400E+02  .003697471  15499.8
    12  145.00  0.2608E+02  .004016869  16175.0
    13  140.00  0.2849E+02  .004388844  16904.9
    14  135.00  0.3161E+02  .004868678  17696.1
    15  130.00  0.3537E+02  .005447809  18556.3
    16  125.00  0.3978E+02  .006127340  19494.7
    17  120.00  0.4437E+02  .006834778  20521.7
    18  115.00  0.4874E+02  .007507668  21650.2
    19  110.00  0.5288E+02  .008146123  22895.1
    20  105.00  0.5770E+02  .008887889  24274.7
    21  100.00  0.7099E+02  .010935376  25811.0
    22  95.00  0.1333E+03  .020531496  26475.5
    23  90.00  0.6951E+03  .107065506  27194.4
    24  85.00  0.1868E+04  .287684768  27975.7
    25  80.00  0.7254E+03  .111738525  28829.0
    26  75.00  0.1312E+04  .202078089  29765.9
    27  70.00  0.1132E+04  .174373001  30801.2
    28  65.00  0.0000E+00  .000000000  31953.4
    29  60.00  0.0000E+00  .000000000  33246.3
    30  55.00  0.0000E+00  .000000000  34711.2
  
```

31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH ACTIVATION

GRAMS/SQ CM	NUCLEI/DAY
0.1000E+00	0.2168E+02
0.2000E+00	0.2196E+02
0.3000E+00	0.2289E+02
0.4000E+00	0.2349E+02
0.5000E+00	0.2473E+02
0.6000E+00	0.2548E+02
0.7000E+00	0.2678E+02
0.8000E+00	0.2847E+02
0.9000E+00	0.2990E+02
0.1000E+01	0.3181E+02
0.1100E+01	0.3507E+02
0.1200E+01	0.3864E+02
0.1300E+01	0.4486E+02
0.1400E+01	0.5833E+02
0.1500E+01	0.8231E+02
0.1600E+01	0.1286E+03
0.1700E+01	0.2376E+03
0.1800E+01	0.6550E+03
0.1900E+01	0.3627E+02
0.2000E+01	0.4307E+02
0.2100E+01	0.5677E+02
0.2200E+01	0.8141E+02
0.2300E+01	0.1311E+03
0.2400E+01	0.2517E+03
0.2500E+01	0.7904E+03
0.2600E+01	0.3174E+02
0.2700E+01	0.3575E+02
0.2800E+01	0.4497E+02
0.2900E+01	0.6156E+02
0.3000E+01	0.9283E+02
0.3100E+01	0.1604E+03
0.3200E+01	0.3544E+03
0.3300E+01	0.2621E+02
0.3400E+01	0.2873E+02
0.3500E+01	0.3234E+02
0.3600E+01	0.3977E+02
0.3700E+01	0.5390E+02
0.3800E+01	0.7988E+02
0.3900E+01	0.1343E+03
0.4000E+01	0.2788E+03
0.4100E+01	0.1278E+04
0.4200E+01	0.2491E+02
0.4300E+01	0.2723E+02
0.4400E+01	0.3116E+02
0.4500E+01	0.3928E+02
0.4600E+01	0.5487E+02
0.4700E+01	0.8352E+02
0.4800E+01	0.1459E+03
0.4900E+01	0.3275E+03
0.5000E+01	0.2076E+02
0.5100E+01	0.2231E+02
0.5200E+01	0.2480E+02
0.5300E+01	0.2731E+02

TOTAL OF AZ= 0.6492E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION	N	PRODUCT	CO56	Q-VALUE=	5.40 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	
5.80	21.70	13.43	342.00	15.18	314.00
20.22	69.00	22.05	46.10	23.75	36.20
27.68	24.90	29.19	23.00	29.66	21.90
				16.79	202.00
				18.23	127.00
				25.77	29.40
				27.04	27.00
				31.22	20.40
				33.23	18.30

35.14	17.00	36.98	16.00	38.75	14.80	40.73	13.80	42.67	13.30
44.53	12.31	79.00	7.09	89.20	5.99	98.90	4.91	108.00	4.43
116.50	4.06	125.10	3.74	133.40	3.51	141.30	3.24	148.90	3.10
154.90	3.13	160.90	2.98	166.20	2.45	166.90	2.87	172.70	2.78
178.40	2.61	183.90	2.53	189.30	2.49	194.50	2.32	199.80	2.10

THE TOTAL ACTIVATION IS 0.4780E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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PROTON
FLUX
PROTONS/DAY*CM**2

1	200.00	0.1966E+03	.004112424
2	195.00	0.2061E+03	.004312775
3	190.00	0.2213E+03	.004630268
4	185.00	0.2361E+03	.004938383
5	180.00	0.2570E+03	.005375684
6	175.00	0.2726E+03	.005702060
7	170.00	0.2920E+03	.006108911
8	165.00	0.3173E+03	.006638024
9	160.00	0.3468E+03	.007256130
10	155.00	0.3802E+03	.007953798
11	150.00	0.4183E+03	.008751991
12	145.00	0.4636E+03	.009699257
13	140.00	0.5195E+03	.010868595
14	135.00	0.5942E+03	.012430809
15	130.00	0.6889E+03	.014412754
16	125.00	0.8067E+03	.016876552
17	120.00	0.9501E+03	.019876638
18	115.00	0.1119E+04	.023403803
19	110.00	0.1322E+04	.027666230
20	105.00	0.1584E+04	.033131734
21	100.00	0.2009E+04	.042026728
22	95.00	0.4031E+04	.084331527
23	90.00	0.6323E+04	.132279873
24	85.00	0.6228E+04	.130294725
25	80.00	0.6157E+04	.128807828
26	75.00	0.6010E+04	.125730664
27	70.00	0.5850E+04	.122381687
28	65.00	0.0000E+00	.000000000
29	60.00	0.0000E+00	.000000000
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.5048E+03
0.2000E+00	0.5139E+03
0.3000E+00	0.5267E+03
0.4000E+00	0.5381E+03
0.5000E+00	0.5551E+03
0.6000E+00	0.5712E+03
0.7000E+00	0.5958E+03
0.8000E+00	0.6299E+03
0.9000E+00	0.6839E+03
0.1000E+01	0.7823E+03
0.1100E+01	0.9747E+03
0.1200E+01	0.1325E+04
0.1300E+01	0.1779E+04
0.1400E+01	0.1689E+04
0.1500E+01	0.1104E+04
0.1600E+01	0.8525E+03
0.1700E+01	0.8135E+03
0.1800E+01	0.9446E+03
0.1900E+01	0.1296E+04
0.2000E+01	0.1693E+04
0.2100E+01	0.1480E+04

0.2200E+01	0.9639E+03
0.2300E+01	0.7340E+03
0.2400E+01	0.6848E+03
0.2500E+01	0.7632E+03
0.2600E+01	0.1010E+04
0.2700E+01	0.1410E+04
0.2800E+01	0.1652E+04
0.2900E+01	0.1131E+04
0.3000E+01	0.7672E+03
0.3100E+01	0.6168E+03
0.3200E+01	0.5705E+03
0.3300E+01	0.6803E+03
0.3400E+01	0.8868E+03
0.3500E+01	0.1240E+04
0.3600E+01	0.1537E+04
0.3700E+01	0.1167E+04
0.3800E+01	0.7574E+03
0.3900E+01	0.5741E+03
0.4000E+01	0.5172E+03
0.4100E+01	0.5448E+03
0.4200E+01	0.6674E+03
0.4300E+01	0.8924E+03
0.4400E+01	0.1262E+04
0.4500E+01	0.1476E+04
0.4600E+01	0.9878E+03
0.4700E+01	0.8497E+03
0.4800E+01	0.5007E+03
0.4900E+01	0.4335E+03
0.5000E+01	0.4830E+03
0.5100E+01	0.5753E+03
0.5200E+01	0.7520E+03
0.5300E+01	0.1059E+04

TOTAL OF AZ= 0.4780E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 20

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	15.50 MEV
13.43	0.02	15.18	0.03	16.79	4.67	18.28	31.00	20.22	46.00		
22.05	55.50	23.75	61.60	25.77	64.30	27.04	60.70	27.68	57.00		
29.19	48.90	29.66	44.50	31.22	35.70	33.23	26.10	35.14	20.50		
36.98	16.70	38.75	14.00	40.79	12.30	42.67	11.00	44.53	10.30		

THE TOTAL ACTIVATION IS 0.2281E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.7598E+01	.000333150
2	195.00	0.9538E+01	.000418238
3	190.00	0.1200E+02	.000526023
4	185.00	0.1512E+02	.000662888
5	180.00	0.1909E+02	.000837141
6	175.00	0.2417E+02	.001059635
7	170.00	0.3066E+02	.001344608
8	165.00	0.3902E+02	.001710853
9	160.00	0.4979E+02	.002183324
10	155.00	0.6375E+02	.002795360
11	150.00	0.8192E+02	.003591897
12	145.00	0.1057E+03	.004633982
13	140.00	0.1369E+03	.006004631
14	135.00	0.1783E+03	.007818869
15	130.00	0.2335E+03	.010239691
16	125.00	0.3079E+03	.013500539
17	120.00	0.4092E+03	.017941132
18	115.00	0.5489E+03	.024067894
19	110.00	0.7458E+03	.032695252
20	105.00	0.1033E+04	.045316678
21	100.00	0.1766E+04	.077445403
22	95.00	0.3158E+04	.138453439
23	90.00	0.3103E+04	.136072725
24	85.00	0.3005E+04	.131771088
25	80.00	0.2859E+04	.125378147
26	75.00	0.2653E+04	.116309248
27	70.00	0.2210E+04	.096888103
28	65.00	0.0000E+00	.000000000

29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.3632E+03		
0.2000E+00		0.3963E+03		
0.3000E+00		0.4402E+03		
0.4000E+00		0.4767E+03		
0.5000E+00		0.5159E+03		
0.6000E+00		0.5428E+03		
0.7000E+00		0.5580E+03		
0.8000E+00		0.5694E+03		
0.9000E+00		0.5756E+03		
0.1000E+01		0.5821E+03		
0.1100E+01		0.5694E+03		
0.1200E+01		0.4927E+03		
0.1300E+01		0.4997E+03		
0.1400E+01		0.5104E+03		
0.1500E+01		0.5169E+03		
0.1600E+01		0.5184E+03		
0.1700E+01		0.5136E+03		
0.1800E+01		0.4935E+03		
0.1900E+01		0.4335E+03		
0.2000E+01		0.4532E+03		
0.2100E+01		0.4640E+03		
0.2200E+01		0.4704E+03		
0.2300E+01		0.4733E+03		
0.2400E+01		0.4699E+03		
0.2500E+01		0.4555E+03		
0.2600E+01		0.3977E+03		
0.2700E+01		0.3902E+03		
0.2800E+01		0.4161E+03		
0.2900E+01		0.4283E+03		
0.3000E+01		0.4343E+03		
0.3100E+01		0.4324E+03		
0.3200E+01		0.4279E+03		
0.3300E+01		0.4150E+03		
0.3400E+01		0.3639E+03		
0.3500E+01		0.3409E+03		
0.3600E+01		0.3689E+03		
0.3700E+01		0.3912E+03		
0.3800E+01		0.3984E+03		
0.3900E+01		0.4009E+03		
0.4000E+01		0.3970E+03		
0.4100E+01		0.3895E+03		
0.4200E+01		0.3729E+03		
0.4300E+01		0.3109E+03		
0.4400E+01		0.3076E+03		
0.4500E+01		0.3335E+03		
0.4600E+01		0.3574E+03		
0.4700E+01		0.3689E+03		
0.4800E+01		0.3720E+03		
0.4900E+01		0.3676E+03		
0.5000E+01		0.3581E+03		
0.5100E+01		0.3439E+03		
0.5200E+01		0.3030E+03		
0.5300E+01		0.2625E+03		
TOTAL OF AZ=	0.2281E+05			
THE NUMBER OF CROSS	SECTION DATA POINTS IS	39		
REACTION	P, A	PRODUCT	MN54	Q-VALUE= 12.73 MEV
MEV	MBS	MEV	MBS	MEV
16.79	0.54	18.28	0.57	20.22
				0.36
				22.05
				0.26
				23.75
				0.48

25.77	1.73	27.04	4.83	27.68	9.20	29.19	22.00	29.66	34.80
31.22	55.70	33.23	92.70	35.14	123.00	36.98	145.00	38.75	157.00
40.79	167.00	42.67	163.00	44.53	157.00	58.10	87.30	63.00	77.90
79.00	74.60	89.20	66.60	98.90	61.10	108.00	57.40	116.50	55.00
125.10	53.00	133.40	51.80	141.30	49.00	148.90	48.00	154.90	46.60
160.90	45.70	166.20	44.30	166.90	44.60	172.70	44.10	178.40	42.50
183.90	41.80	189.30	41.90	194.50	41.00	199.80	40.40		

THE TOTAL ACTIVATION IS 0.2067E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	0.3151E+04	.015249822	10794.0
2	0.3321E+04	.016069820	11143.3
3	0.3497E+04	.016923899	11513.3
4	0.3690E+04	.017855201	11906.1
5	0.3909E+04	.018915188	12323.5
6	0.4139E+04	.020026339	12768.0
7	0.4408E+04	.021331469	13242.1
8	0.4696E+04	.022721762	13748.7
9	0.5011E+04	.024249753	14291.3
10	0.5343E+04	.025853675	14873.5
11	0.5703E+04	.027595581	15499.8
12	0.6131E+04	.029668542	16175.0
13	0.6642E+04	.032138463	16904.9
14	0.7260E+04	.035132524	17696.1
15	0.8026E+04	.038836807	18556.3
16	0.8911E+04	.043121763	19494.7
17	0.9839E+04	.047609951	20521.7
18	0.1089E+05	.052889712	21650.2
19	0.1272E+05	.061568391	22895.1
20	0.1600E+05	.077439927	24274.7
21	0.1817E+05	.087907046	25811.0
22	0.1638E+05	.079275884	26475.5
23	0.1439E+05	.069626473	27194.4
24	0.1180E+05	.057102244	27975.7
25	0.8244E+04	.039891038	28829.0
26	0.3808E+04	.018428802	29765.9
27	0.5724E+03	.002769955	30801.2
28	0.0000E+00	.000000000	31953.4
29	0.0000E+00	.000000000	33246.3
30	0.0000E+00	.000000000	34711.2
31	0.0000E+00	.000000000	36390.0
32	0.0000E+00	.000000000	37815.7
33	0.0000E+00	.000000000	39475.7
34	0.0000E+00	.000000000	41445.9
35	0.0000E+00	.000000000	43843.0
36	0.0000E+00	.000000000	47588.0
37	0.0000E+00	.000000000	52609.5
38	0.0000E+00	.000000000	59873.0
39	0.0000E+00	.000000000	86539.0
40	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.5066E+04
0.2000E+00	0.5015E+04
0.3000E+00	0.4929E+04
0.4000E+00	0.4879E+04
0.5000E+00	0.4827E+04
0.6000E+00	0.4794E+04
0.7000E+00	0.4726E+04
0.8000E+00	0.4672E+04
0.9000E+00	0.4622E+04
0.1000E+01	0.4555E+04
0.1100E+01	0.4503E+04
0.1200E+01	0.4466E+04
0.1300E+01	0.4425E+04
0.1400E+01	0.4393E+04
0.1500E+01	0.4332E+04
0.1600E+01	0.4284E+04
0.1700E+01	0.4244E+04
0.1800E+01	0.4182E+04
0.1900E+01	0.4145E+04

0.2000E+01	0.4114E+04
0.2100E+01	0.4079E+04
0.2200E+01	0.4048E+04
0.2300E+01	0.3999E+04
0.2400E+01	0.3948E+04
0.2500E+01	0.3909E+04
0.2600E+01	0.3846E+04
0.2700E+01	0.3825E+04
0.2800E+01	0.3798E+04
0.2900E+01	0.3776E+04
0.3000E+01	0.3740E+04
0.3100E+01	0.3705E+04
0.3200E+01	0.3662E+04
0.3300E+01	0.3618E+04
0.3400E+01	0.3578E+04
0.3500E+01	0.3519E+04
0.3600E+01	0.3497E+04
0.3700E+01	0.3480E+04
0.3800E+01	0.3466E+04
0.3900E+01	0.3434E+04
0.4000E+01	0.3406E+04
0.4100E+01	0.3357E+04
0.4200E+01	0.3325E+04
0.4300E+01	0.3283E+04
0.4400E+01	0.3223E+04
0.4500E+01	0.3197E+04
0.4600E+01	0.3181E+04
0.4700E+01	0.3166E+04
0.4800E+01	0.3155E+04
0.4900E+01	0.3124E+04
0.5000E+01	0.3095E+04
0.5100E+01	0.3048E+04
0.5200E+01	0.3014E+04
0.5300E+01	0.2979E+04

TOTAL OF AZ= 0.2067E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 7

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	24.10 MEV
33.23	0.40	35.14	0.61	36.98	0.90	38.75	1.04	40.79	1.25		
42.67	1.34	44.53	1.37								

THE TOTAL ACTIVATION IS 0.7878E+04 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.4697E+03	.059623286
2	195.00	0.4540E+03	.057631440
3	190.00	0.4391E+03	.055734850
4	185.00	0.4249E+03	.053929362
5	180.00	0.4113E+03	.052210923
6	175.00	0.3984E+03	.050575718
7	170.00	0.3862E+03	.049020283
8	165.00	0.3745E+03	.047540944
9	160.00	0.3635E+03	.046134487
10	155.00	0.3529E+03	.044797510
11	150.00	0.3429E+03	.043526717
12	145.00	0.3334E+03	.042318743
13	140.00	0.3243E+03	.041167010
14	135.00	0.3156E+03	.040065251
15	130.00	0.3073E+03	.039011225
16	125.00	0.2994E+03	.038001850
17	120.00	0.2917E+03	.037028745
18	115.00	0.2842E+03	.036075670
19	110.00	0.2769E+03	.035145018
20	105.00	0.2691E+03	.034158405
21	100.00	0.2422E+03	.030740287
22	95.00	0.1914E+03	.024290502
23	90.00	0.1432E+03	.018172998
24	85.00	0.9850E+02	.012503490
25	80.00	0.5768E+02	.007321125
26	75.00	0.2183E+02	.002771519
27	70.00	0.3960E+01	.000502621
28	65.00	0.0000E+00	.000000000

29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.1928E+03
0.2000E+00	0.1910E+03
0.3000E+00	0.1890E+03
0.4000E+00	0.1869E+03
0.5000E+00	0.1849E+03
0.6000E+00	0.1830E+03
0.7000E+00	0.1809E+03
0.8000E+00	0.1789E+03
0.9000E+00	0.1771E+03
0.1000E+01	0.1755E+03
0.1100E+01	0.1735E+03
0.1200E+01	0.1717E+03
0.1300E+01	0.1698E+03
0.1400E+01	0.1681E+03
0.1500E+01	0.1662E+03
0.1600E+01	0.1645E+03
0.1700E+01	0.1628E+03
0.1800E+01	0.1613E+03
0.1900E+01	0.1595E+03
0.2000E+01	0.1578E+03
0.2100E+01	0.1562E+03
0.2200E+01	0.1546E+03
0.2300E+01	0.1529E+03
0.2400E+01	0.1513E+03
0.2500E+01	0.1498E+03
0.2600E+01	0.1483E+03
0.2700E+01	0.1469E+03
0.2800E+01	0.1452E+03
0.2900E+01	0.1437E+03
0.3000E+01	0.1422E+03
0.3100E+01	0.1406E+03
0.3200E+01	0.1392E+03
0.3300E+01	0.1378E+03
0.3400E+01	0.1364E+03
0.3500E+01	0.1350E+03
0.3600E+01	0.1337E+03
0.3700E+01	0.1323E+03
0.3800E+01	0.1308E+03
0.3900E+01	0.1294E+03
0.4000E+01	0.1280E+03
0.4100E+01	0.1267E+03
0.4200E+01	0.1255E+03
0.4300E+01	0.1242E+03
0.4400E+01	0.1229E+03
0.4500E+01	0.1217E+03
0.4600E+01	0.1205E+03
0.4700E+01	0.1191E+03
0.4800E+01	0.1178E+03
0.4900E+01	0.1164E+03
0.5000E+01	0.1152E+03
0.5100E+01	0.1141E+03
0.5200E+01	0.1130E+03
0.5300E+01	0.1118E+03

TOTAL OF AZ= 0.7878E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION	He3	PRODUCT	MN52	Q-VALUE=	13.20 MEV
MEV	MBS	MEV	MBS	MEV	MBS
18.28	0.11	20.22	0.20	22.05	3.47
				23.75	11.80
				25.77	21.30

27.04	23.50	27.68	27.10	29.19	28.90	29.66	32.00	31.22	32.20
33.23	32.20	35.14	29.20	36.98	25.70	38.75	22.10	40.79	18.70
42.67	16.40	44.53	14.60	49.00	11.90	52.90	11.00	58.10	9.90
63.00	21.50	79.00	33.40	89.20	27.90	98.90	24.20	108.00	22.40
116.50	20.90	125.10	20.10	133.40	19.20	141.30	18.30	148.90	17.70
154.90	17.30	160.90	16.80	166.20	16.40	166.90	16.40	172.70	16.00
178.40	15.50	183.90	15.30	189.30	15.00	194.50	14.70	199.80	14.40

THE TOTAL ACTIVATION IS 0.6148E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1150E+04	.018700484	10794.0
2 195.00	0.1216E+04	.019773353	11143.3
3 190.00	0.1287E+04	.020936364	11513.3
4 185.00	0.1363E+04	.022173924	11906.1
5 180.00	0.1446E+04	.023518490	12323.5
6 175.00	0.1536E+04	.024977973	12768.0
7 170.00	0.1637E+04	.026628414	13242.1
8 165.00	0.1752E+04	.028504383	13748.7
9 160.00	0.1880E+04	.030582370	14291.3
10 155.00	0.2018E+04	.032831844	14873.5
11 150.00	0.2178E+04	.035430335	15499.8
12 145.00	0.2367E+04	.038494222	16175.0
13 140.00	0.2601E+04	.042300723	16904.9
14 135.00	0.2907E+04	.047277581	17696.1
15 130.00	0.3306E+04	.053777136	18556.3
16 125.00	0.3712E+04	.060370039	19494.7
17 120.00	0.3939E+04	.064073168	20521.7
18 115.00	0.3850E+04	.062628634	21650.2
19 110.00	0.3475E+04	.056517608	22895.1
20 105.00	0.3099E+04	.050405487	24274.7
21 100.00	0.3233E+04	.052580830	25811.0
22 95.00	0.2870E+04	.046687607	26475.5
23 90.00	0.2409E+04	.039190639	27194.4
24 85.00	0.2173E+04	.035349935	27975.7
25 80.00	0.1884E+04	.030652190	28829.0
26 75.00	0.1453E+04	.023639871	29765.9
27 70.00	0.7375E+03	.011996263	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.1453E+04
0.2000E+00	0.1459E+04
0.3000E+00	0.1454E+04
0.4000E+00	0.1453E+04
0.5000E+00	0.1439E+04
0.6000E+00	0.1431E+04
0.7000E+00	0.1408E+04
0.8000E+00	0.1380E+04
0.9000E+00	0.1361E+04
0.1000E+01	0.1346E+04
0.1100E+01	0.1345E+04
0.1200E+01	0.1336E+04
0.1300E+01	0.1328E+04
0.1400E+01	0.1307E+04
0.1500E+01	0.1277E+04
0.1600E+01	0.1261E+04
0.1700E+01	0.1259E+04
0.1800E+01	0.1248E+04
0.1900E+01	0.1240E+04

0.2000E+01	0.1231E+04
0.2100E+01	0.1215E+04
0.2200E+01	0.1198E+04
0.2300E+01	0.1179E+04
0.2400E+01	0.1168E+04
0.2500E+01	0.1166E+04
0.2600E+01	0.1154E+04
0.2700E+01	0.1149E+04
0.2800E+01	0.1138E+04
0.2900E+01	0.1124E+04
0.3000E+01	0.1108E+04
0.3100E+01	0.1087E+04
0.3200E+01	0.1076E+04
0.3300E+01	0.1077E+04
0.3400E+01	0.1080E+04
0.3500E+01	0.1068E+04
0.3600E+01	0.1058E+04
0.3700E+01	0.1049E+04
0.3800E+01	0.1032E+04
0.3900E+01	0.1013E+04
0.4000E+01	0.9966E+03
0.4100E+01	0.9860E+03
0.4200E+01	0.9872E+03
0.4300E+01	0.9904E+03
0.4400E+01	0.9826E+03
0.4500E+01	0.9826E+03
0.4600E+01	0.9702E+03
0.4700E+01	0.9566E+03
0.4800E+01	0.9399E+03
0.4900E+01	0.9178E+03
0.5000E+01	0.9073E+03
0.5100E+01	0.9040E+03
0.5200E+01	0.9030E+03
0.5300E+01	0.9038E+03

TOTAL OF AZ= 0.6148E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	10.00 MEV
13.43	1.09	15.18	1.72	16.79	2.24	18.28	2.53	20.22	2.33		
22.05	1.46	23.75	1.07	25.77	0.65	27.04	0.29	27.68	0.43		
29.19	0.55	29.66	0.97	31.22	3.50	33.23	15.10	35.14	33.00		
36.98	53.20	38.75	68.70	40.79	84.10	42.67	94.50	44.53	100.20		
49.00	70.00	52.90	71.60	58.10	52.80	63.00	43.00	79.00	61.40		
89.20	70.80	99.90	70.10	108.00	67.30	116.50	65.50	125.10	64.30		
133.40	63.60	141.30	60.70	148.90	60.10	154.90	59.30	160.90	58.90		
166.20	58.10	166.90	56.90	172.70	56.70	178.40	55.50	183.90	55.00		
189.30	54.90	194.50	54.60	199.80	54.10						

THE TOTAL ACTIVATION IS 0.1699E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.4079E+04	.024009416
2	195.00	0.4238E+04	.025240935
3	190.00	0.4501E+04	.026499186
4	185.00	0.4729E+04	.027836282
5	180.00	0.4943E+04	.029100165
6	175.00	0.5176E+04	.030470422
7	170.00	0.5463E+04	.032160018
8	165.00	0.5775E+04	.033998240
9	160.00	0.6114E+04	.035989739
10	155.00	0.6455E+04	.037996419
11	150.00	0.6814E+04	.040114377
12	145.00	0.7237E+04	.042601626
13	140.00	0.7714E+04	.045411654
14	135.00	0.8205E+04	.048298981
15	130.00	0.8553E+04	.050352242
16	125.00	0.8661E+04	.050988097
17	120.00	0.8471E+04	.049864728
18	115.00	0.8174E+04	.048117913
19	110.00	0.8554E+04	.050354507
20	105.00	0.9836E+04	.057902802
21	100.00	0.9762E+04	.057464089

22	95.00	0.8562E+04	.050405640	26475.5
23	90.00	0.7389E+04	.043498743	27194.4
24	85.00	0.5689E+04	.033490803	27975.7
25	80.00	0.3572E+04	.021025456	28829.0
26	75.00	0.1070E+04	.006296322	29765.9
27	70.00	0.8683E+02	.000511123	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.4100E+04		
0.2000E+00		0.4066E+04		
0.3000E+00		0.4004E+04		
0.4000E+00		0.3950E+04		
0.5000E+00		0.3896E+04		
0.6000E+00		0.3864E+04		
0.7000E+00		0.3827E+04		
0.8000E+00		0.3809E+04		
0.9000E+00		0.3788E+04		
0.1000E+01		0.3771E+04		
0.1100E+01		0.3710E+04		
0.1200E+01		0.3656E+04		
0.1300E+01		0.3590E+04		
0.1400E+01		0.3552E+04		
0.1500E+01		0.3521E+04		
0.1600E+01		0.3505E+04		
0.1700E+01		0.3497E+04		
0.1800E+01		0.3487E+04		
0.1900E+01		0.3454E+04		
0.2000E+01		0.3399E+04		
0.2100E+01		0.3342E+04		
0.2200E+01		0.3290E+04		
0.2300E+01		0.3246E+04		
0.2400E+01		0.3226E+04		
0.2500E+01		0.3217E+04		
0.2600E+01		0.3206E+04		
0.2700E+01		0.3200E+04		
0.2800E+01		0.3177E+04		
0.2900E+01		0.3129E+04		
0.3000E+01		0.3077E+04		
0.3100E+01		0.3027E+04		
0.3200E+01		0.2986E+04		
0.3300E+01		0.2958E+04		
0.3400E+01		0.2943E+04		
0.3500E+01		0.2933E+04		
0.3600E+01		0.2925E+04		
0.3700E+01		0.2911E+04		
0.3800E+01		0.2897E+04		
0.3900E+01		0.2845E+04		
0.4000E+01		0.2805E+04		
0.4100E+01		0.2759E+04		
0.4200E+01		0.2726E+04		
0.4300E+01		0.2696E+04		
0.4400E+01		0.2681E+04		
0.4500E+01		0.2666E+04		
0.4600E+01		0.2655E+04		
0.4700E+01		0.2641E+04		
0.4800E+01		0.2632E+04		
0.4900E+01		0.2597E+04		
0.5000E+01		0.2559E+04		
0.5100E+01		0.2519E+04		

0.5200E+01 0.2488E+04
 0.5300E+01 0.2460E+04
 TOTAL OF AZ= 0.1699E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 27
 REACTION 4P5N PRODUCT V48 Q-VALUE= 35.00 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 38.75 0.24 40.79 0.73 42.67 1.58 44.53 2.62 49.00 3.90
 52.90 5.20 58.10 5.60 63.00 4.90 79.00 6.63 89.20 12.80
 98.90 15.20 108.00 15.30 116.50 15.20 125.10 15.70 133.40 16.20
 141.30 16.10 148.90 16.50 154.90 17.00 160.90 16.20 166.20 17.10
 166.90 16.30 172.70 16.30 178.40 16.20 183.90 16.30 189.30 16.40
 194.50 16.80 199.80 17.00

THE TOTAL ACTIVATION IS 0.2909E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1182E+04	.040632606	10794.0
2 195.00	0.1230E+04	.042283788	11143.3
3 190.00	0.1280E+04	.043988138	11513.3
4 185.00	0.1335E+04	.045884352	11906.1
5 180.00	0.1373E+04	.047184635	12323.5
6 175.00	0.1413E+04	.048553132	12768.0
7 170.00	0.1446E+04	.049711086	13242.1
8 165.00	0.1486E+04	.051083174	13748.7
9 160.00	0.1527E+04	.052494220	14291.3
10 155.00	0.1564E+04	.053749446	14873.5
11 150.00	0.1606E+04	.055210635	15499.8
12 145.00	0.1661E+04	.057102520	16175.0
13 140.00	0.1714E+04	.058906753	16904.9
14 135.00	0.1724E+04	.059259057	17696.1
15 130.00	0.1618E+04	.055625990	18556.3
16 125.00	0.1427E+04	.049065027	19494.7
17 120.00	0.1209E+04	.041553032	20521.7
18 115.00	0.1008E+04	.034631774	21650.2
19 110.00	0.8848E+03	.030412329	22895.1
20 105.00	0.7787E+03	.026764994	24274.7
21 100.00	0.6312E+03	.021696288	25811.0
22 95.00	0.4721E+03	.016227027	26475.5
23 90.00	0.3194E+03	.010980019	27194.4
24 85.00	0.1582E+03	.005437780	27975.7
25 80.00	0.4377E+02	.001504578	28829.0
26 75.00	0.1673E+01	.000057507	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.6934E+03
 0.2000E+00 0.6870E+03
 0.3000E+00 0.6794E+03
 0.4000E+00 0.6725E+03
 0.5000E+00 0.6654E+03
 0.6000E+00 0.6591E+03
 0.7000E+00 0.6530E+03
 0.8000E+00 0.6477E+03
 0.9000E+00 0.6425E+03
 0.1000E+01 0.6373E+03
 0.1100E+01 0.6308E+03
 0.1200E+01 0.6242E+03
 0.1300E+01 0.6171E+03
 0.1400E+01 0.6112E+03

0.1500E+01	0.6055E+03
0.1600E+01	0.6004E+03
0.1700E+01	0.5955E+03
0.1800E+01	0.5910E+03
0.1900E+01	0.5861E+03
0.2000E+01	0.5804E+03
0.2100E+01	0.5746E+03
0.2200E+01	0.5687E+03
0.2300E+01	0.5634E+03
0.2400E+01	0.5581E+03
0.2500E+01	0.5531E+03
0.2600E+01	0.5484E+03
0.2700E+01	0.5441E+03
0.2800E+01	0.5395E+03
0.2900E+01	0.5338E+03
0.3000E+01	0.5281E+03
0.3100E+01	0.5226E+03
0.3200E+01	0.5174E+03
0.3300E+01	0.5125E+03
0.3400E+01	0.5078E+03
0.3500E+01	0.5043E+03
0.3600E+01	0.5013E+03
0.3700E+01	0.4974E+03
0.3800E+01	0.4932E+03
0.3900E+01	0.4875E+03
0.4000E+01	0.4824E+03
0.4100E+01	0.4773E+03
0.4200E+01	0.4723E+03
0.4300E+01	0.4675E+03
0.4400E+01	0.4631E+03
0.4500E+01	0.4591E+03
0.4600E+01	0.4555E+03
0.4700E+01	0.4523E+03
0.4800E+01	0.4493E+03
0.4900E+01	0.4451E+03
0.5000E+01	0.4402E+03
0.5100E+01	0.4353E+03
0.5200E+01	0.4308E+03
0.5300E+01	0.4270E+03

TOTAL OF AZ= 0.2909E+05
 PHYLAIRD job terminated at 29-MAY-1991 11:49:37.92

Accounting information:			
Buffered I/O count:	99	Peak working set size:	421
Direct I/O count:	194	Peak page file size:	2527
Page faults:	793	Mounted volumes:	0
Charged CPU time:	0 00:00:04.09	Elapsed time:	0 00:00:18.58

\$run ptrap4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PFED

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THE TARGET IS      FE
TM,C,AND A ARE    55.847  148.000  3.000
NCM= 10  NQM= 2  NMC= 3
THE COVERING MATERIAL IS ALUM
TC,CC, AND AC ARE  27.000  184.000  5.400
THICKNESS OF COVERING MATERIAL  5.00
THE INELASTIC XSECTIONS FOR COVERING
MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS
10.00 610.00  17.00 690.00  30.00 700.00  35.00 660.00  40.00 650.00
60.00 500.00  100.00 425.00  225.00 400.00  340.00 402.00  460.00 422.00
THE INELASTIC XSECTIONS OF THE TARGET
MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS
20.001611.00  25.001617.00  30.001649.00  35.001703.00  40.001740.00
50.001748.00  60.001776.00  100.001662.00  225.001600.00  340.001626.00
TARGET THICKNESS  5.271 GM/CM**2  WIDTH  5.080CM  LENGTH  5.080 CM
INITIAL THETA  0.0  FINAL THETA  89.0  INCREMENT  11.0
INITIAL PHI  0.0  FINAL PHI  0.0  INCREMENT  1.0
200.00  5.00  5.00  0.100  8
THE NUMBER OF REACTIONS EQUAL  8
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
1.0  211010.0  1.5  129570.0  2.0  120000.0  2.5  120000.0  3.0  113220.0
3.7  113180.0  4.5  113430.0  6.0  108220.0  10.0  86539.0  15.0  59873.0
30.0  43843.0  50.0  36390.0  100.0  25811.0  200.0  10794.0  300.0  4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 37
REACTION      PRODUCT  C057      Q-VALUE= 1.60 MEV
MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS      MEV  MBS
13.43  7.64  15.18  5.05  16.79  3.92  18.28  3.41  20.22  2.57
22.05  2.31  23.75  1.87  25.77  1.50  27.04  1.38  27.68  1.17
29.19  1.04  29.66  0.88  31.22  0.83  33.23  0.66  35.14  0.60
38.75  0.50  42.67  0.41  44.50  0.36  79.00  0.34  89.20  0.30
98.90  0.26  108.00  0.25  116.50  0.23  125.10  0.22  133.40  0.21
141.30  0.20  148.90  0.21  154.90  0.19  160.90  0.18  166.20  0.14
166.90  0.18  172.70  0.17  178.40  0.17  183.90  0.16  189.30  0.16
194.50  0.15  199.80  0.14
THE TOTAL ACTIVATION IS  0.4568E+04 NUCLEI /DAY
      PROTON      PARTIAL      FRACTIONAL      PROTON
      ENERGY      ACTIVATION      ACTIVATION      FLUX
      MEV      NUCLEI PER DAY
1  200.00  0.1945E+02  .004260500  10794.0
2  195.00  0.2060E+02  .004509170  11143.3
3  190.00  0.2208E+02  .004834605  11513.3
4  185.00  0.2377E+02  .005204660  11906.1
5  180.00  0.2611E+02  .005716340  12323.5
6  175.00  0.2803E+02  .006137353  12768.0
7  170.00  0.3031E+02  .006635747  13242.1
8  165.00  0.4982E+02  .010906307  13748.7
9  160.00  0.9786E+02  .021425787  14291.3
10  155.00  0.2491E+02  .005453335  14873.5
11  150.00  0.2715E+02  .005943356  15499.8
12  145.00  0.2968E+02  .006498973  16175.0
13  140.00  0.3267E+02  .007151857  16904.9
14  135.00  0.3642E+02  .007974328  17696.1
15  130.00  0.4357E+02  .009538095  18556.3
16  125.00  0.1387E+03  .030373102  19494.7
17  120.00  0.1757E+03  .038461450  20521.7
18  115.00  0.1346E+03  .029469468  21650.2
19  110.00  0.1715E+03  .037538547  22895.1
20  105.00  0.1543E+03  .033782106  24274.7
21  100.00  0.1726E+03  .037784211  25811.0
22  95.00  0.5271E+03  .115392461  26475.5
23  90.00  0.3861E+03  .084540062  27194.4
24  85.00  0.1038E+04  .227158964  27975.7
25  80.00  0.3224E+03  .070583925  28829.0
26  75.00  0.5831E+03  .127650440  29765.9
27  70.00  0.2516E+03  .055074710  30801.2
28  65.00  0.0000E+00  .000000000  31953.4
29  60.00  0.0000E+00  .000000000  33246.3
30  55.00  0.0000E+00  .000000000  34711.2

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31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH

ACTIVATION

GRAMS/SQ CM

NUCLEI/DAY

0.1000E+00	0.1497E+02
0.2000E+00	0.1646E+02
0.3000E+00	0.1962E+02
0.4000E+00	0.1554E+02
0.5000E+00	0.1848E+02
0.6000E+00	0.2138E+02
0.7000E+00	0.1917E+02
0.8000E+00	0.1871E+02
0.9000E+00	0.2010E+02
0.1000E+01	0.1948E+02
0.1100E+01	0.2574E+02
0.1200E+01	0.2049E+02
0.1300E+01	0.2780E+02
0.1400E+01	0.2801E+02
0.1500E+01	0.3244E+02
0.1600E+01	0.4901E+02
0.1700E+01	0.6914E+02
0.1800E+01	0.1671E+03
0.1900E+01	0.3002E+02
0.2000E+01	0.3816E+02
0.2100E+01	0.1484E+03
0.2200E+01	0.4577E+02
0.2300E+01	0.7024E+02
0.2400E+01	0.1601E+03
0.2500E+01	0.1960E+03
0.2600E+01	0.5891E+02
0.2700E+01	0.6853E+02
0.2800E+01	0.3740E+02
0.2900E+01	0.8934E+02
0.3000E+01	0.2145E+03
0.3100E+01	0.5990E+02
0.3200E+01	0.1091E+03
0.3300E+01	0.5333E+02
0.3400E+01	0.1809E+03
0.3500E+01	0.1807E+03
0.3600E+01	0.6604E+02
0.3700E+01	0.4658E+02
0.3800E+01	0.7479E+02
0.3900E+01	0.2064E+03
0.4000E+01	0.1216E+03
0.4100E+01	0.3414E+03
0.4200E+01	0.1430E+03
0.4300E+01	0.1169E+03
0.4400E+01	0.4137E+02
0.4500E+01	0.7082E+02
0.4600E+01	0.2357E+03
0.4700E+01	0.4836E+02
0.4800E+01	0.6685E+02
0.4900E+01	0.1564E+03
0.5000E+01	0.1827E+03
0.5100E+01	0.1160E+03
0.5200E+01	0.1342E+03
0.5300E+01	0.4681E+02

TOTAL OF AZ= 0.4561E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION	N	PRODUCT	C056	Q-VALUE=	5.40 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	
5.80 21.70	13.43 342.00	15.18 314.00	16.79 202.00	18.23 127.00	
20.22 69.00	22.05 46.10	23.75 36.20	25.77 29.40	27.04 27.00	
27.68 24.90	29.19 23.00	29.66 21.90	31.22 20.40	33.23 18.30	

35.14	17.00	36.98	16.00	38.75	14.80	40.79	13.80	42.67	13.30
44.53	12.31	79.00	7.09	89.20	5.99	98.90	4.91	108.00	4.43
116.50	4.06	125.10	3.74	133.40	3.51	141.30	3.24	148.90	3.10
154.90	3.13	160.90	2.98	166.20	2.45	166.90	2.87	172.70	2.78
178.40	2.61	183.90	2.53	189.30	2.49	194.50	2.32	199.80	2.10

THE TOTAL ACTIVATION IS 0.3637E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.3158E+03	.008681718	10794.0
2 195.00	0.3397E+03	.0093339713	11143.3
3 190.00	0.3677E+03	.010109118	11513.3
4 185.00	0.3986E+03	.010959155	11906.1
5 180.00	0.4405E+03	.012109972	12323.5
6 175.00	0.4837E+03	.013298128	12768.0
7 170.00	0.5419E+03	.014898050	13242.1
8 165.00	0.7750E+03	.021305848	13748.7
9 160.00	0.8284E+03	.022773720	14291.3
10 155.00	0.4398E+03	.012090286	14873.5
11 150.00	0.4919E+03	.013523171	15499.8
12 145.00	0.5563E+03	.015293756	16175.0
13 140.00	0.6375E+03	.017527353	16904.9
14 135.00	0.7442E+03	.020461379	17696.1
15 130.00	0.9343E+03	.025685443	18556.3
16 125.00	0.1291E+04	.035496034	19494.7
17 120.00	0.1451E+04	.039885879	20521.7
18 115.00	0.1678E+04	.046122335	21650.2
19 110.00	0.1540E+04	.042343836	22895.1
20 105.00	0.2008E+04	.055203799	24274.7
21 100.00	0.2608E+04	.071693063	25811.0
22 95.00	0.3823E+04	.105095237	26475.5
23 90.00	0.3513E+04	.096573919	27194.4
24 85.00	0.3460E+04	.095124654	27975.7
25 80.00	0.2736E+04	.075231262	28823.0
26 75.00	0.2671E+04	.073434025	29765.9
27 70.00	0.1300E+04	.035739008	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.3197E+03
0.2000E+00	0.3507E+03
0.3000E+00	0.4130E+03
0.4000E+00	0.3334E+03
0.5000E+00	0.3881E+03
0.6000E+00	0.4613E+03
0.7000E+00	0.4043E+03
0.8000E+00	0.4025E+03
0.9000E+00	0.4308E+03
0.1000E+01	0.4349E+03
0.1100E+01	0.5979E+03
0.1200E+01	0.5430E+03
0.1300E+01	0.7781E+03
0.1400E+01	0.6933E+03
0.1500E+01	0.5600E+03
0.1600E+01	0.7179E+03
0.1700E+01	0.6385E+03
0.1800E+01	0.7547E+03
0.1900E+01	0.7543E+03
0.2000E+01	0.7815E+03
0.2100E+01	0.8303E+03

0.2200E+01	0.6111E+03
0.2300E+01	0.5912E+03
0.2400E+01	0.6785E+03
0.2500E+01	0.6501E+03
0.2600E+01	0.1170E+04
0.2700E+01	0.8081E+03
0.2800E+01	0.7231E+03
0.2900E+01	0.7303E+03
0.3000E+01	0.6542E+03
0.3100E+01	0.9185E+03
0.3200E+01	0.7787E+03
0.3300E+01	0.7448E+03
0.3400E+01	0.7809E+03
0.3500E+01	0.7393E+03
0.3600E+01	0.7743E+03
0.3700E+01	0.9769E+03
0.3800E+01	0.7854E+03
0.3900E+01	0.8616E+03
0.4000E+01	0.7872E+03
0.4100E+01	0.5976E+03
0.4200E+01	0.7977E+03
0.4300E+01	0.6660E+03
0.4400E+01	0.1011E+04
0.4500E+01	0.8386E+03
0.4600E+01	0.7309E+03
0.4700E+01	0.7849E+03
0.4800E+01	0.6088E+03
0.4900E+01	0.8691E+03
0.5000E+01	0.6515E+03
0.5100E+01	0.6571E+03
0.5200E+01	0.7618E+03
0.5300E+01	0.7649E+03

TOTAL OF AZ= 0.3609E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 20
 REACTION 2N PRODUCT C055 Q-VALUE= 15.50 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
13.43	0.02	15.18	0.03	16.79	4.67	18.28	31.00	20.22	46.00
22.05	55.50	23.75	61.60	25.77	64.30	27.04	60.70	27.68	57.00
29.19	48.90	29.66	44.50	31.22	35.70	33.23	26.10	35.14	20.50
36.98	16.70	38.75	14.00	40.79	12.30	42.67	11.00	44.53	10.30

THE TOTAL ACTIVATION IS 0.1692E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.001335751	10794.0
2	195.00	0.001740816	11143.3
3	190.00	0.002285541	11513.3
4	185.00	0.003029433	11906.1
5	180.00	0.004067312	12323.5
6	175.00	0.005572860	12768.0
7	170.00	0.008462239	13242.1
8	165.00	0.013628907	13748.7
9	160.00	0.015182170	14291.3
10	155.00	0.005476845	14873.5
11	150.00	0.007183210	15499.8
12	145.00	0.009500506	16175.0
13	140.00	0.012710324	16904.9
14	135.00	0.017539268	17696.1
15	130.00	0.029046346	18556.3
16	125.00	0.034638908	19494.7
17	120.00	0.042370223	20521.7
18	115.00	0.058496248	21650.2
19	110.00	0.052603595	22895.1
20	105.00	0.073307149	24274.7
21	100.00	0.103147857	25811.0
22	95.00	0.124384739	26475.5
23	90.00	0.101871602	27194.4
24	85.00	0.098651223	27975.7
25	80.00	0.075092033	28829.0
26	75.00	0.069660485	29765.9
27	70.00	0.029014340	30801.2
28	65.00	0.000000000	31953.4

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
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0.1000E+00	0.1615E+03
0.2000E+00	0.1806E+03
0.3000E+00	0.2131E+03
0.4000E+00	0.1967E+03
0.5000E+00	0.2234E+03
0.6000E+00	0.2821E+03
0.7000E+00	0.2483E+03
0.8000E+00	0.2614E+03
0.9000E+00	0.2702E+03
0.1000E+01	0.2771E+03
0.1100E+01	0.3638E+03
0.1200E+01	0.2645E+03
0.1300E+01	0.3621E+03
0.1400E+01	0.2968E+03
0.1500E+01	0.2952E+03
0.1600E+01	0.3634E+03
0.1700E+01	0.2937E+03
0.1800E+01	0.3313E+03
0.1900E+01	0.2877E+03
0.2000E+01	0.2885E+03
0.2100E+01	0.4070E+03
0.2200E+01	0.3154E+03
0.2300E+01	0.3144E+03
0.2400E+01	0.3484E+03
0.2500E+01	0.3144E+03
0.2600E+01	0.4464E+03
0.2700E+01	0.3397E+03
0.2800E+01	0.2971E+03
0.2900E+01	0.3891E+03
0.3000E+01	0.3263E+03
0.3100E+01	0.3616E+03
0.3200E+01	0.3264E+03
0.3300E+01	0.3374E+03
0.3400E+01	0.3664E+03
0.3500E+01	0.3473E+03
0.3600E+01	0.3422E+03
0.3700E+01	0.3605E+03
0.3800E+01	0.3601E+03
0.3900E+01	0.3653E+03
0.4000E+01	0.3411E+03
0.4100E+01	0.3319E+03
0.4200E+01	0.4223E+03
0.4300E+01	0.2772E+03
0.4400E+01	0.3377E+03
0.4500E+01	0.3029E+03
0.4600E+01	0.3426E+03
0.4700E+01	0.3785E+03
0.4800E+01	0.3674E+03
0.4900E+01	0.3185E+03
0.5000E+01	0.3101E+03
0.5100E+01	0.3532E+03
0.5200E+01	0.3711E+03
0.5300E+01	0.2865E+03

TOTAL OF AZ= 0.1687E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 39

REACTION	P.A	PRODUCT	MN54	Q-VALUE=
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS
16.79	0.54	18.28	0.57	20.22
				0.36
				22.05
				0.26
				23.75
				0.48

12.73 MEV

25.77	1.73	27.04	4.83	27.68	9.20	29.19	22.00	29.66	34.80
31.22	55.70	33.23	92.70	35.14	123.00	36.98	145.00	38.75	157.00
40.79	167.00	42.67	163.00	44.53	157.00	58.10	87.30	63.00	77.90
79.00	74.60	89.20	66.60	98.90	61.10	108.00	57.40	116.50	55.00
125.10	53.00	133.40	51.80	141.30	49.00	148.90	48.00	154.90	46.60
160.90	45.70	166.20	44.30	166.90	44.60	172.70	44.10	178.40	42.50
183.90	41.80	189.30	41.90	194.50	41.00	199.80	40.40		

THE TOTAL ACTIVATION IS 0.2008E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.4924E+04	.024520092
2	195.00	0.5211E+04	.025949640
3	190.00	0.5522E+04	.027495697
4	185.00	0.5863E+04	.029196525
5	180.00	0.6247E+04	.031106867
6	175.00	0.6728E+04	.033502873
7	170.00	0.7299E+04	.036345303
8	165.00	0.7643E+04	.038057853
9	160.00	0.8021E+04	.039938219
10	155.00	0.8419E+04	.0429475132
11	150.00	0.8836E+04	.047022339
12	145.00	0.9279E+04	.051355223
13	140.00	0.9747E+04	.056079370
14	135.00	0.1024E+05	.0613529
15	130.00	0.1071E+05	.067193
16	125.00	0.1121E+05	.0735092
17	120.00	0.1174E+05	.0803993
18	115.00	0.1230E+05	.0878229
19	110.00	0.1288E+05	.09588033
20	105.00	0.1348E+05	.010423200
21	100.00	0.1410E+05	.0110564
22	95.00	0.1474E+05	.0117174
23	90.00	0.1540E+05	.0124094
24	85.00	0.1608E+05	.0131231
25	80.00	0.1678E+05	.01383935
26	75.00	0.1750E+05	.0145307
27	70.00	0.1824E+05	.0152112
28	65.00	0.1900E+05	.0158800
29	60.00	0.1978E+05	.016534
30	55.00	0.2058E+05	.017172
31	50.00	0.2140E+05	.017790
32	45.00	0.2224E+05	.018390
33	40.00	0.2310E+05	.018970
34	35.00	0.2398E+05	.019530
35	30.00	0.2488E+05	.020070
36	25.00	0.2580E+05	.020590
37	20.00	0.2674E+05	.021090
38	15.00	0.2770E+05	.021570
39	10.00	0.2868E+05	.022030
40	5.00	0.2968E+05	.022470

PROTON FLUX PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.3660E+04
0.2000E+00	0.3979E+04
0.3000E+00	0.4670E+04
0.4000E+00	0.3635E+04
0.5000E+00	0.4242E+04
0.6000E+00	0.4900E+04
0.7000E+00	0.4215E+04
0.8000E+00	0.4017E+04
0.9000E+00	0.4189E+04
0.1000E+01	0.3879E+04
0.1100E+01	0.5035E+04
0.1200E+01	0.3589E+04
0.1300E+01	0.4795E+04
0.1400E+01	0.4133E+04
0.1500E+01	0.3827E+04
0.1600E+01	0.4652E+04
0.1700E+01	0.3792E+04
0.1800E+01	0.4508E+04
0.1900E+01	0.3762E+04

0.2000E+01	0.3588E+04
0.2100E+01	0.4662E+04
0.2200E+01	0.3933E+04
0.2300E+01	0.3753E+04
0.2400E+01	0.3907E+04
0.2500E+01	0.3689E+04
0.2600E+01	0.4796E+04
0.2700E+01	0.3869E+04
0.2800E+01	0.3193E+04
0.2900E+01	0.4162E+04
0.3000E+01	0.3573E+04
0.3100E+01	0.4096E+04
0.3200E+01	0.3574E+04
0.3300E+01	0.3664E+04
0.3400E+01	0.3801E+04
0.3500E+01	0.3566E+04
0.3600E+01	0.3399E+04
0.3700E+01	0.3605E+04
0.3800E+01	0.3446E+04
0.3900E+01	0.3667E+04
0.4000E+01	0.3368E+04
0.4100E+01	0.3201E+04
0.4200E+01	0.3974E+04
0.4300E+01	0.2898E+04
0.4400E+01	0.3561E+04
0.4500E+01	0.3103E+04
0.4600E+01	0.3153E+04
0.4700E+01	0.3267E+04
0.4800E+01	0.3157E+04
0.4900E+01	0.3124E+04
0.5000E+01	0.2844E+04
0.5100E+01	0.2982E+04
0.5200E+01	0.3353E+04
0.5300E+01	0.2819E+04

TOTAL OF AZ= 0.2002E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 7

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=
33.23	0.40	35.14	0.61	36.98	0.90	38.75	1.04	40.79	1.25	24.10 MEV
42.67	1.34	44.53	1.37							

THE TOTAL ACTIVATION IS 0.8486E+04 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6236E+03	.073483907	10794.0
2 195.00	0.6009E+03	.070811450	11143.3
3 190.00	0.5792E+03	.068253160	11513.3
4 185.00	0.5584E+03	.065802239	11908.1
5 180.00	0.5385E+03	.063451476	12323.5
6 175.00	0.5193E+03	.061196893	12768.0
7 170.00	0.5002E+03	.058947731	13242.1
8 165.00	0.4803E+03	.056602798	13748.7
9 160.00	0.4612E+03	.054347541	14291.3
10 155.00	0.3529E+03	.041582797	14873.5
11 150.00	0.3419E+03	.040288128	15493.8
12 145.00	0.3313E+03	.039041996	16175.0
13 140.00	0.3211E+03	.037833394	16904.9
14 135.00	0.3107E+03	.036614474	17696.1
15 130.00	0.2983E+03	.035146512	18556.3
16 125.00	0.2858E+03	.033681285	19494.7
17 120.00	0.2732E+03	.032188453	20521.7
18 115.00	0.2581E+03	.030410249	21650.2
19 110.00	0.2037E+03	.023998713	22895.1
20 105.00	0.1874E+03	.022084741	24274.7
21 100.00	0.1621E+03	.019103391	25811.0
22 95.00	0.1276E+03	.015033332	26475.5
23 90.00	0.7954E+02	.009372687	27194.4
24 85.00	0.5472E+02	.006448652	27975.7
25 80.00	0.2563E+02	.003020685	28829.0
26 75.00	0.9704E+01	.001143524	29765.9
27 70.00	0.8799E+00	.000103690	30801.2
28 65.00	0.0000E+00	.000000000	31953.4

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.1929E+03
0.2000E+00	0.2094E+03
0.3000E+00	0.2507E+03
0.4000E+00	0.1853E+03
0.5000E+00	0.2243E+03
0.6000E+00	0.2376E+03
0.7000E+00	0.2175E+03
0.8000E+00	0.1938E+03
0.9000E+00	0.2114E+03
0.1000E+01	0.1872E+03
0.1100E+01	0.2356E+03
0.1200E+01	0.1718E+03
0.1300E+01	0.2159E+03
0.1400E+01	0.1960E+03
0.1500E+01	0.1738E+03
0.1600E+01	0.2093E+03
0.1700E+01	0.1688E+03
0.1800E+01	0.2011E+03
0.1900E+01	0.1637E+03
0.2000E+01	0.1583E+03
0.2100E+01	0.1970E+03
0.2200E+01	0.1678E+03
0.2300E+01	0.1588E+03
0.2400E+01	0.1640E+03
0.2500E+01	0.1539E+03
0.2600E+01	0.1936E+03
0.2700E+01	0.1592E+03
0.2800E+01	0.1289E+03
0.2900E+01	0.1643E+03
0.3000E+01	0.1416E+03
0.3100E+01	0.1590E+03
0.3200E+01	0.1393E+03
0.3300E+01	0.1402E+03
0.3400E+01	0.1454E+03
0.3500E+01	0.1352E+03
0.3600E+01	0.1291E+03
0.3700E+01	0.1359E+03
0.3800E+01	0.1283E+03
0.3900E+01	0.1367E+03
0.4000E+01	0.1238E+03
0.4100E+01	0.1168E+03
0.4200E+01	0.1441E+03
0.4300E+01	0.1026E+03
0.4400E+01	0.1266E+03
0.4500E+01	0.1085E+03
0.4600E+01	0.1107E+03
0.4700E+01	0.1160E+03
0.4800E+01	0.1084E+03
0.4900E+01	0.1089E+03
0.5000E+01	0.9810E+02
0.5100E+01	0.1042E+03
0.5200E+01	0.1160E+03
0.5300E+01	0.9652E+02

TOTAL OF AZ= 0.8464E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=
18.28	0.11	20.22	0.20	22.05	3.47	23.75	11.80	25.77	21.30	13.20 MEV

27.04	23.50	27.68	27.10	29.19	28.90	29.66	32.00	31.22	32.20
33.23	32.20	35.14	29.20	36.98	25.70	38.75	22.10	40.79	18.70
42.67	16.40	44.53	14.60	49.00	11.90	52.90	11.00	58.10	9.90
63.00	21.50	79.00	33.40	89.20	27.90	98.90	24.20	108.00	22.40
116.50	20.90	125.10	20.10	133.40	19.20	141.30	18.30	148.90	17.70
154.90	17.30	160.90	16.80	166.20	16.40	166.90	16.40	172.70	16.00
178.40	15.50	183.90	15.30	189.30	15.00	194.50	14.70	199.80	14.40

THE TOTAL ACTIVATION IS 0.6219E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.1815E+04	.029183688
2	195.00	0.1930E+04	.031037778
3	190.00	0.2061E+04	.033148762
4	185.00	0.2198E+04	.035342298
5	180.00	0.2327E+04	.037412841
6	175.00	0.2450E+04	.039396390
7	170.00	0.2611E+04	.041979004
8	165.00	0.2761E+04	.044404726
9	160.00	0.2914E+04	.046864953
10	155.00	0.2276E+04	.036600150
11	150.00	0.2466E+04	.039662242
12	145.00	0.2665E+04	.042862408
13	140.00	0.2887E+04	.046431478
14	135.00	0.3161E+04	.050838921
15	130.00	0.3428E+04	.055130158
16	125.00	0.3575E+04	.057496093
17	120.00	0.3615E+04	.058130242
18	115.00	0.3495E+04	.056208566
19	110.00	0.2682E+04	.043134887
20	105.00	0.2449E+04	.039386239
21	100.00	0.2310E+04	.037143610
22	95.00	0.1914E+04	.030772677
23	90.00	0.1339E+04	.021525096
24	85.00	0.1207E+04	.019415628
25	80.00	0.8375E+03	.013468341
26	75.00	0.6459E+03	.010387185
27	70.00	0.1639E+03	.002635535
28	65.00	0.0000E+00	.000000000
29	60.00	0.0000E+00	.000000000
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1147E+04
0.2000E+00	0.1272E+04
0.3000E+00	0.1512E+04
0.4000E+00	0.1149E+04
0.5000E+00	0.1376E+04
0.6000E+00	0.1539E+04
0.7000E+00	0.1367E+04
0.8000E+00	0.1259E+04
0.9000E+00	0.1353E+04
0.1000E+01	0.1232E+04
0.1100E+01	0.1589E+04
0.1200E+01	0.1138E+04
0.1300E+01	0.1487E+04
0.1400E+01	0.1315E+04
0.1500E+01	0.1190E+04
0.1600E+01	0.1456E+04
0.1700E+01	0.1180E+04
0.1800E+01	0.1416E+04
0.1900E+01	0.1167E+04

0.2000E+01	0.1133E+04
0.2100E+01	0.1432E+04
0.2200E+01	0.1217E+04
0.2300E+01	0.1159E+04
0.2400E+01	0.1213E+04
0.2500E+01	0.1149E+04
0.2600E+01	0.1476E+04
0.2700E+01	0.1202E+04
0.2800E+01	0.9834E+03
0.2900E+01	0.1261E+04
0.3000E+01	0.1094E+04
0.3100E+01	0.1242E+04
0.3200E+01	0.1102E+04
0.3300E+01	0.1127E+04
0.3400E+01	0.1179E+04
0.3500E+01	0.1102E+04
0.3600E+01	0.1054E+04
0.3700E+01	0.1111E+04
0.3800E+01	0.1056E+04
0.3900E+01	0.1122E+04
0.4000E+01	0.1028E+04
0.4100E+01	0.9703E+03
0.4200E+01	0.1189E+04
0.4300E+01	0.8590E+03
0.4400E+01	0.1067E+04
0.4500E+01	0.9334E+03
0.4600E+01	0.9529E+03
0.4700E+01	0.9875E+03
0.4800E+01	0.9357E+03
0.4900E+01	0.9335E+03
0.5000E+01	0.8572E+03
0.5100E+01	0.8974E+03
0.5200E+01	0.9944E+03
0.5300E+01	0.8393E+03

TOTAL OF AZ= 0.6200E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	MBS	MEV	3P3N	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE= 10.00 MEV
13.43	1.09	15.18	1.72	16.79	2.24	18.28	2.53	20.22	2.33	
22.05	1.46	23.75	1.07	25.77	0.65	27.04	0.29	27.68	0.43	
29.19	0.55	29.66	0.97	31.22	3.50	33.23	15.10	35.14	33.00	
36.98	53.20	38.75	68.70	40.79	84.10	42.67	94.50	44.53	100.20	
49.00	70.00	52.90	71.60	58.10	52.80	63.00	43.00	79.00	61.40	
89.20	70.80	98.90	70.10	108.00	67.30	116.50	65.50	125.10	64.30	
133.40	63.60	141.30	60.70	148.90	60.10	154.90	59.30	160.90	58.90	
166.20	58.10	166.90	56.90	172.70	56.70	178.40	55.50	183.90	55.00	
189.30	54.90	194.50	54.60	199.80	54.10					

THE TOTAL ACTIVATION IS 0.1759E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6285E+04	.035725564	10794.0
2 195.00	0.6597E+04	.037503060	11143.3
3 190.00	0.6912E+04	.039291177	11513.3
4 185.00	0.7226E+04	.041078154	11906.1
5 180.00	0.7523E+04	.042763621	12323.5
6 175.00	0.7892E+04	.044860642	12768.0
7 170.00	0.8286E+04	.047100734	13242.1
8 165.00	0.8588E+04	.048821181	13748.7
9 160.00	0.8909E+04	.050644308	14291.3
10 155.00	0.6975E+04	.039651878	14873.5
11 150.00	0.7318E+04	.041597482	15499.8
12 145.00	0.7676E+04	.043634880	16175.0
13 140.00	0.8090E+04	.045988008	16904.9
14 135.00	0.8468E+04	.048137076	17696.1
15 130.00	0.8547E+04	.048584118	18556.3
16 125.00	0.8526E+04	.048466358	19494.7
17 120.00	0.8429E+04	.047916878	20521.7
18 115.00	0.8227E+04	.046766274	21650.2
19 110.00	0.6862E+04	.039004657	22895.1
20 105.00	0.6995E+04	.039765608	24274.7
21 100.00	0.6524E+04	.037086423	25811.0

22	95.00	0.5713E+04	.032474048	26475.5
23	90.00	0.4105E+04	.023335697	27194.4
24	85.00	0.3161E+04	.017966766	27975.7
25	80.00	0.1587E+04	.009023589	28829.0
26	75.00	0.4754E+03	.002702222	29765.9
27	70.00	0.1929E+02	.000109681	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.3437E+04		
0.2000E+00		0.3752E+04		
0.3000E+00		0.4451E+04		
0.4000E+00		0.3358E+04		
0.5000E+00		0.4010E+04		
0.6000E+00		0.4460E+04		
0.7000E+00		0.3967E+04		
0.8000E+00		0.3678E+04		
0.9000E+00		0.3935E+04		
0.1000E+01		0.3576E+04		
0.1100E+01		0.4574E+04		
0.1200E+01		0.3273E+04		
0.1300E+01		0.4256E+04		
0.1400E+01		0.3781E+04		
0.1500E+01		0.3438E+04		
0.1600E+01		0.4169E+04		
0.1700E+01		0.3402E+04		
0.1800E+01		0.4052E+04		
0.1900E+01		0.3339E+04		
0.2000E+01		0.3208E+04		
0.2100E+01		0.4074E+04		
0.2200E+01		0.3467E+04		
0.2300E+01		0.3294E+04		
0.2400E+01		0.3423E+04		
0.2500E+01		0.3240E+04		
0.2600E+01		0.4146E+04		
0.2700E+01		0.3414E+04		
0.2800E+01		0.2794E+04		
0.2900E+01		0.3597E+04		
0.3000E+01		0.3095E+04		
0.3100E+01		0.3488E+04		
0.3200E+01		0.3064E+04		
0.3300E+01		0.3110E+04		
0.3400E+01		0.3241E+04		
0.3500E+01		0.3033E+04		
0.3600E+01		0.2897E+04		
0.3700E+01		0.3042E+04		
0.3800E+01		0.2903E+04		
0.3900E+01		0.3081E+04		
0.4000E+01		0.2825E+04		
0.4100E+01		0.2683E+04		
0.4200E+01		0.3298E+04		
0.4300E+01		0.2398E+04		
0.4400E+01		0.2948E+04		
0.4500E+01		0.2541E+04		
0.4600E+01		0.2587E+04		
0.4700E+01		0.2697E+04		
0.4800E+01		0.2579E+04		
0.4900E+01		0.2551E+04		
0.5000E+01		0.2328E+04		
0.5100E+01		0.2456E+04		

0.5200E+01 0.2728E+04
 0.5300E+01 0.2278E+04
 TOTAL OF AZ= 0.1754E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 27
 REACTION 4P5N PRODUCT V48 Q-VALUE= 35.00 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 38.75 0.24 40.79 0.73 42.67 1.58 44.53 2.62 49.00 3.90
 52.90 5.20 58.10 5.60 63.00 4.90 79.00 6.63 89.20 12.80
 98.90 15.20 108.00 15.30 116.50 15.20 125.10 15.70 133.40 16.20
 141.30 16.10 148.90 16.50 154.90 17.00 160.90 16.20 166.20 17.10
 166.90 16.30 172.70 16.30 178.40 16.20 183.90 16.30 189.30 16.40
 194.50 16.80 199.80 17.00

THE TOTAL ACTIVATION IS 0.3222E+05 NUCLEI /DAY

PROTON PARTIAL FRACTIONAL
 ENERGY ACTIVATION ACTIVATION
 MEV NUCLEI PER DAY

1	200.00	0.1763E+04	.054726548
2	195.00	0.1820E+04	.056489989
3	190.00	0.1871E+04	.058077436
4	185.00	0.1915E+04	.059444230
5	180.00	0.1945E+04	.060364883
6	175.00	0.1977E+04	.061356291
7	170.00	0.1992E+04	.061823606
8	165.00	0.2008E+04	.062328324
9	160.00	0.2020E+04	.062696390
10	155.00	0.1622E+04	.050343163
11	150.00	0.1640E+04	.050884269
12	145.00	0.1648E+04	.051144887
13	140.00	0.1633E+04	.050677326
14	135.00	0.1566E+04	.048606269
15	130.00	0.1435E+04	.044534139
16	125.00	0.1263E+04	.039188381
17	120.00	0.1066E+04	.033097483
18	115.00	0.8760E+03	.027186008
19	110.00	0.6185E+03	.019195694
20	105.00	0.5202E+03	.016145764
21	100.00	0.4208E+03	.013059464
22	95.00	0.3147E+03	.009767400
23	90.00	0.1775E+03	.005507592
24	85.00	0.8789E+02	.002727598
25	80.00	0.1945E+02	.000603758
26	75.00	0.7436E+00	.000023077
27	70.00	0.0000E+00	.000000000
28	65.00	0.0000E+00	.000000000
29	60.00	0.0000E+00	.000000000
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON
 FLUX
 PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.6883E+03
 0.2000E+00 0.7532E+03
 0.3000E+00 0.9063E+03
 0.4000E+00 0.6673E+03
 0.5000E+00 0.8152E+03
 0.6000E+00 0.8664E+03
 0.7000E+00 0.7964E+03
 0.8000E+00 0.7099E+03
 0.9000E+00 0.7803E+03
 0.1000E+01 0.6916E+03
 0.1100E+01 0.8738E+03
 0.1200E+01 0.6354E+03
 0.1300E+01 0.8012E+03
 0.1400E+01 0.7348E+03

0.1500E+01	0.6515E+03
0.1600E+01	0.7864E+03
0.1700E+01	0.6362E+03
0.1800E+01	0.7615E+03
0.1900E+01	0.6202E+03
0.2000E+01	0.6045E+03
0.2100E+01	0.7500E+03
0.2200E+01	0.6447E+03
0.2300E+01	0.6127E+03
0.2400E+01	0.6322E+03
0.2500E+01	0.5971E+03
0.2600E+01	0.7428E+03
0.2700E+01	0.6229E+03
0.2800E+01	0.5025E+03
0.2900E+01	0.6384E+03
0.3000E+01	0.5535E+03
0.3100E+01	0.6166E+03
0.3200E+01	0.5427E+03
0.3300E+01	0.5458E+03
0.3400E+01	0.5679E+03
0.3500E+01	0.5280E+03
0.3600E+01	0.5054E+03
0.3700E+01	0.5289E+03
0.3800E+01	0.5021E+03
0.3900E+01	0.5328E+03
0.4000E+01	0.4846E+03
0.4100E+01	0.4584E+03
0.4200E+01	0.5623E+03
0.4300E+01	0.4018E+03
0.4400E+01	0.4947E+03
0.4500E+01	0.4236E+03
0.4600E+01	0.4334E+03
0.4700E+01	0.4519E+03
0.4800E+01	0.4261E+03
0.4900E+01	0.4267E+03
0.5000E+01	0.3849E+03
0.5100E+01	0.4070E+03
0.5200E+01	0.4535E+03
0.5300E+01	0.3799E+03

TOTAL OF AZ= 0.3214E+05
 PHYLAIRD job terminated at 29-MAY-1991 11:21:27.85

Accounting information:			
Buffered I/O count:	101	Peak working set size:	460
Direct I/O count:	194	Peak page file size:	2527
Page faults:	808	Mounted volumes:	0
Charged CPU time:	0 00:00:46.54	Elapsed time:	0 00:02:51.97

\$run ptrap4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PFED

```

    THE TARGET IS      FE
    TM,C,AND A ARE      55.847  148.000  3.000
    NCM= 10  NQM= 2  NMC= 3
    THE COVERING MATERIAL IS ALUM
    TC,CC, AND AC ARE      27.000  184.000  5.400
    THICKNESS OF COVERING MATERIAL  0.00
    THE INELASTIC XSECTIONS FOR COVERING
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
    60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
    THE INELASTIC XSECTIONS OF THE TARGET
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
    50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
    TARGET THICKNESS  5.271 CM/CM**2  WIDTH  5.080CM  LENGTH  5.080 CM
    INITIAL THETA  0.0  FINAL THETA  0.0  INCREMENT 11.0
    INITIAL PHI  0.0  FINAL PHI  0.0  INCREMENT 1.0
    200.00  5.00  5.00  0.100  8
    THE NUMBER OF REACTIONS EQUAL  8
    THE NUMBER OF PROTON FLUX DATA POINTS IS 15
    MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
    1.0  211010.0  1.5  129570.0  2.0  120000.0  2.5  120000.0  3.0  113220.0
    3.7  113180.0  4.5  113430.0  6.0  108220.0  10.0  86539.0  15.0  59873.0
    30.0  43843.0  50.0  36390.0  100.0  25811.0  200.0  10794.0  300.0  4017.6
    THE NUMBER OF CROSS SECTION DATA POINTS IS 37
    REACTION  PRODUCT  CO57  Q-VALUE=  1.60 MEV
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    13.43  7.64  15.18  5.05  16.79  3.92  18.28  3.41  20.22  2.57
    22.05  2.31  23.75  1.87  25.77  1.50  27.04  1.38  27.68  1.17
    29.19  1.04  29.66  0.88  31.22  0.83  33.23  0.66  35.14  0.60
    38.75  0.50  42.67  0.41  44.50  0.36  79.00  0.34  89.20  0.30
    98.90  0.26  108.00  0.25  116.50  0.23  125.10  0.22  133.40  0.21
    141.30  0.20  148.90  0.21  154.90  0.19  160.90  0.18  166.20  0.14
    166.90  0.18  172.70  0.17  178.40  0.17  183.90  0.16  189.30  0.16
    194.50  0.15  199.80  0.14
    THE TOTAL ACTIVATION IS  0.1033E+05 NUCLEI /DAY
    PROTON  PARTIAL  FRACTIONAL  PROTON
    ENERGY  ACTIVATION  ACTIVATION  FLUX
    MEV  NUCLEI PER DAY
    1  200.00  0.1238E+02  .001198181  10794.0
    2  195.00  0.1261E+02  .001220311  11143.3
    3  190.00  0.1338E+02  .001295681  11513.3
    4  185.00  0.1443E+02  .001397175  11906.1
    5  180.00  0.1624E+02  .001572092  12323.5
    6  175.00  0.1732E+02  .001677007  12768.0
    7  170.00  0.1832E+02  .001773339  13242.1
    8  165.00  0.1924E+02  .001862569  13748.7
    9  160.00  0.2058E+02  .001992333  14291.3
    10  155.00  0.2214E+02  .002143602  14873.5
    11  150.00  0.2400E+02  .002323703  15499.8
    12  145.00  0.2608E+02  .002524431  16175.0
    13  140.00  0.2849E+02  .002758201  16904.9
    14  135.00  0.3161E+02  .003059756  17696.1
    15  130.00  0.3537E+02  .003423715  18556.3
    16  125.00  0.3978E+02  .003850772  19494.7
    17  120.00  0.4437E+02  .004295366  20521.7
    18  115.00  0.4874E+02  .004718249  21650.2
    19  110.00  0.5288E+02  .005119491  22895.1
    20  105.00  0.5770E+02  .005585659  24274.7
    21  100.00  0.7099E+02  .006872418  25811.0
    22  95.00  0.1333E+03  .012903169  26475.5
    23  90.00  0.6951E+03  .067286104  27194.4
    24  85.00  0.1868E+04  .180797592  27975.7
    25  80.00  0.7254E+03  .070222289  28829.0
    26  75.00  0.1312E+04  .126997456  29765.9
    27  70.00  0.1132E+04  .109585993  30801.2
    28  65.00  0.1229E+04  .118963018  31953.4
    29  60.00  0.1417E+04  .137193292  33246.3
    30  55.00  0.1192E+04  .115386277  34711.2
  
```

31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00		0.1683E+03	
0.2000E+00		0.3108E+03	
0.3000E+00		0.8869E+03	
0.4000E+00		0.1008E+03	
0.5000E+00		0.1601E+03	
0.6000E+00		0.3013E+03	
0.7000E+00		0.9379E+03	
0.8000E+00		0.6419E+02	
0.9000E+00		0.8975E+02	
0.1000E+01		0.1404E+03	
0.1100E+01		0.2622E+03	
0.1200E+01		0.7460E+03	
0.1300E+01		0.4486E+02	
0.1400E+01		0.5833E+02	
0.1500E+01		0.8231E+02	
0.1600E+01		0.1286E+03	
0.1700E+01		0.2376E+03	
0.1800E+01		0.6550E+03	
0.1900E+01		0.3627E+02	
0.2000E+01		0.4307E+02	
0.2100E+01		0.5677E+02	
0.2200E+01		0.8141E+02	
0.2300E+01		0.1311E+03	
0.2400E+01		0.2517E+03	
0.2500E+01		0.7904E+03	
0.2600E+01		0.3174E+02	
0.2700E+01		0.3575E+02	
0.2800E+01		0.4497E+02	
0.2900E+01		0.6156E+02	
0.3000E+01		0.9283E+02	
0.3100E+01		0.1604E+03	
0.3200E+01		0.3544E+03	
0.3300E+01		0.2621E+02	
0.3400E+01		0.2873E+02	
0.3500E+01		0.3234E+02	
0.3600E+01		0.3977E+02	
0.3700E+01		0.5390E+02	
0.3800E+01		0.7988E+02	
0.3900E+01		0.1343E+03	
0.4000E+01		0.2788E+03	
0.4100E+01		0.1278E+04	
0.4200E+01		0.2491E+02	
0.4300E+01		0.2723E+02	
0.4400E+01		0.3116E+02	
0.4500E+01		0.3928E+02	
0.4600E+01		0.5487E+02	
0.4700E+01		0.8352E+02	
0.4800E+01		0.1459E+03	
0.4900E+01		0.3275E+03	
0.5000E+01		0.2076E+02	
0.5100E+01		0.2231E+02	
0.5200E+01		0.2480E+02	
0.5300E+01		0.2731E+02	

TOTAL OF AZ= 0.1033E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION	N	PRODUCT	C056	Q-VALUE=	5.40 MEV
MEV	MBS	MEV	MBS	MEV	MBS
5.80	21.70	13.43	342.00	15.18	314.00
20.22	69.00	22.05	46.10	16.79	202.00
27.68	24.90	29.19	23.00	25.77	29.40
				27.04	27.00
				33.23	18.30

35.14	17.00	36.98	16.00	38.75	14.80	40.79	13.80	42.67	13.30
44.53	12.31	79.00	7.09	89.20	5.99	98.90	4.91	108.00	4.43
116.50	4.06	125.10	3.74	133.40	3.51	141.30	3.24	148.90	3.10
154.90	3.13	160.90	2.98	166.20	2.45	166.90	2.87	172.70	2.78
178.40	2.61	183.90	2.53	189.30	2.49	194.50	2.32	199.80	2.10

THE TOTAL ACTIVATION IS 0.5775E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
1 200.00	0.1966E+03	.003403844
2 195.00	0.2061E+03	.003569673
3 190.00	0.2213E+03	.003832462
4 185.00	0.2361E+03	.004087488
5 180.00	0.2570E+03	.004449441
6 175.00	0.2726E+03	.004719581
7 170.00	0.2920E+03	.005056331
8 165.00	0.3173E+03	.005494277
9 160.00	0.3468E+03	.006005881
10 155.00	0.3802E+03	.006583340
11 150.00	0.4183E+03	.007244002
12 145.00	0.4636E+03	.008028053
13 140.00	0.5195E+03	.008995910
14 135.00	0.5942E+03	.010288952
15 130.00	0.6889E+03	.011929402
16 125.00	0.8067E+03	.013968683
17 120.00	0.9501E+03	.016451847
18 115.00	0.1119E+04	.019371273
19 110.00	0.1322E+04	.022899272
20 105.00	0.1584E+04	.027423060
21 100.00	0.2009E+04	.034785423
22 95.00	0.4031E+04	.069801003
23 90.00	0.6323E+04	.109487742
24 85.00	0.6228E+04	.107844643
25 80.00	0.6157E+04	.106613934
26 75.00	0.6010E+04	.104066975
27 70.00	0.5850E+04	.101295032
28 65.00	0.5467E+04	.094664395
29 60.00	0.4192E+04	.072585635
30 55.00	0.2918E+03	.005052272
31 50.00	0.0000E+00	.000000000
32 45.00	0.0000E+00	.000000000
33 40.00	0.0000E+00	.000000000
34 35.00	0.0000E+00	.000000000
35 30.00	0.0000E+00	.000000000
36 25.00	0.0000E+00	.000000000
37 20.00	0.0000E+00	.000000000
38 15.00	0.0000E+00	.000000000
39 10.00	0.0000E+00	.000000000
40 5.00	0.0000E+00	.000000000

PROTON
FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1821E+04
0.2000E+00	0.2138E+04
0.3000E+00	0.1854E+04
0.4000E+00	0.1350E+04
0.5000E+00	0.1261E+04
0.6000E+00	0.1499E+04
0.7000E+00	0.1904E+04
0.8000E+00	0.1769E+04
0.9000E+00	0.1200E+04
0.1000E+01	0.9891E+03
0.1100E+01	0.1041E+04
0.1200E+01	0.1325E+04
0.1300E+01	0.1779E+04
0.1400E+01	0.1689E+04
0.1500E+01	0.1104E+04
0.1600E+01	0.8525E+03
0.1700E+01	0.8135E+03
0.1800E+01	0.9446E+03
0.1900E+01	0.1296E+04
0.2000E+01	0.1693E+04
0.2100E+01	0.1480E+04

0.2200E+01	0.9639E+03
0.2300E+01	0.7340E+03
0.2400E+01	0.6848E+03
0.2500E+01	0.7632E+03
0.2600E+01	0.1010E+04
0.2700E+01	0.1410E+04
0.2800E+01	0.1652E+04
0.2900E+01	0.1131E+04
0.3000E+01	0.7672E+03
0.3100E+01	0.6168E+03
0.3200E+01	0.5705E+03
0.3300E+01	0.6803E+03
0.3400E+01	0.8868E+03
0.3500E+01	0.1240E+04
0.3600E+01	0.1537E+04
0.3700E+01	0.1167E+04
0.3800E+01	0.7574E+03
0.3900E+01	0.5741E+03
0.4000E+01	0.5172E+03
0.4100E+01	0.5448E+03
0.4200E+01	0.6674E+03
0.4300E+01	0.8924E+03
0.4400E+01	0.1262E+04
0.4500E+01	0.1476E+04
0.4600E+01	0.9878E+03
0.4700E+01	0.6497E+03
0.4800E+01	0.5007E+03
0.4900E+01	0.4335E+03
0.5000E+01	0.4830E+03
0.5100E+01	0.5753E+03
0.5200E+01	0.7520E+03
0.5300E+01	0.1059E+04

TOTAL OF AZ= 0.5775E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 20

REACTION	2N	PRODUCT	C055	Q-VALUE=	15.50 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	MBS
13.43	0.02	15.18	0.03	16.79	4.67
22.05	55.50	23.75	61.80	25.77	64.30
29.19	48.90	29.66	44.50	31.22	35.70
36.98	16.70	38.75	14.00	40.79	12.30
					42.67
					11.00
					44.53
					10.30

THE TOTAL ACTIVATION IS 0.2384E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.7598E+01	.000318702
2	195.00	0.9538E+01	.000400101
3	190.00	0.1200E+02	.000503211
4	185.00	0.1512E+02	.000634141
5	180.00	0.1909E+02	.000800838
6	175.00	0.2417E+02	.001013683
7	170.00	0.3066E+02	.001286297
8	165.00	0.3902E+02	.001636660
9	160.00	0.4979E+02	.002088642
10	155.00	0.6375E+02	.002674137
11	150.00	0.8192E+02	.003436131
12	145.00	0.1057E+03	.004433025
13	140.00	0.1369E+03	.005744234
14	135.00	0.1783E+03	.007479797
15	130.00	0.2335E+03	.009795638
16	125.00	0.3079E+03	.012915074
17	120.00	0.4092E+03	.017163098
18	115.00	0.5489E+03	.023024166
19	110.00	0.7456E+03	.031277388
20	105.00	0.1033E+04	.043351475
21	100.00	0.1766E+04	.074086905
22	95.00	0.3158E+04	.132449269
23	90.00	0.3103E+04	.130171806
24	85.00	0.3005E+04	.126056701
25	80.00	0.2859E+04	.119940996
26	75.00	0.2653E+04	.111265384
27	70.00	0.2210E+04	.092686452
28	65.00	0.1027E+04	.043068368

29	60.00	0.7095E+01	.000297634	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
		NUCLID/DAY

0.1000E+00	0.6273E+03
0.2000E+00	0.6364E+03
0.3000E+00	0.6536E+03
0.4000E+00	0.6533E+03
0.5000E+00	0.6440E+03
0.6000E+00	0.5544E+03
0.7000E+00	0.5582E+03
0.8000E+00	0.5694E+03
0.9000E+00	0.5756E+03
0.1000E+01	0.5821E+03
0.1100E+01	0.5694E+03
0.1200E+01	0.4927E+03
0.1300E+01	0.4997E+03
0.1400E+01	0.5104E+03
0.1500E+01	0.5169E+03
0.1600E+01	0.5184E+03
0.1700E+01	0.5136E+03
0.1800E+01	0.4935E+03
0.1900E+01	0.4335E+03
0.2000E+01	0.4532E+03
0.2100E+01	0.4640E+03
0.2200E+01	0.4704E+03
0.2300E+01	0.4733E+03
0.2400E+01	0.4699E+03
0.2500E+01	0.4555E+03
0.2600E+01	0.3977E+03
0.2700E+01	0.3902E+03
0.2800E+01	0.4161E+03
0.2900E+01	0.4283E+03
0.3000E+01	0.4343E+03
0.3100E+01	0.4324E+03
0.3200E+01	0.4279E+03
0.3300E+01	0.4150E+03
0.3400E+01	0.3639E+03
0.3500E+01	0.3409E+03
0.3600E+01	0.3689E+03
0.3700E+01	0.3912E+03
0.3800E+01	0.3984E+03
0.3900E+01	0.4009E+03
0.4000E+01	0.3970E+03
0.4100E+01	0.3895E+03
0.4200E+01	0.3729E+03
0.4300E+01	0.3109E+03
0.4400E+01	0.3076E+03
0.4500E+01	0.3335E+03
0.4600E+01	0.3574E+03
0.4700E+01	0.3689E+03
0.4800E+01	0.3720E+03
0.4900E+01	0.3676E+03
0.5000E+01	0.3581E+03
0.5100E+01	0.3439E+03
0.5200E+01	0.3030E+03
0.5300E+01	0.2625E+03

TOTAL OF AZ= 0.2384E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 39

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=
16.79	0.54	18.28	0.57	20.22	0.36	22.05	0.26	23.75	0.48	12.73 MEV

25.77	1.73	27.04	4.83	27.68	9.20	29.19	22.00	29.66	34.80
31.22	55.70	33.23	92.70	35.14	123.00	36.98	145.00	38.75	157.00
40.79	167.00	42.67	163.00	44.53	157.00	58.10	87.30	63.00	77.90
79.00	74.60	89.20	66.60	98.90	61.10	108.00	57.40	116.50	55.00
125.10	53.00	133.40	51.80	141.30	49.00	148.90	48.00	154.90	46.60
160.90	45.70	166.20	44.30	166.90	44.60	172.70	44.10	178.40	42.50
183.90	41.80	189.30	41.90	194.50	41.00	199.80	40.40		

THE TOTAL ACTIVATION IS 0.2067E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.3151E+04	.015248221
2	195.00	0.3321E+04	.016068133
3	190.00	0.3497E+04	.016922122
4	185.00	0.3690E+04	.017853327
5	180.00	0.3909E+04	.018913202
6	175.00	0.4139E+04	.0200024236
7	170.00	0.4408E+04	.021329230
8	165.00	0.4696E+04	.022719376
9	160.00	0.5011E+04	.024247205
10	155.00	0.5343E+04	.025850961
11	150.00	0.5703E+04	.027592683
12	145.00	0.6131E+04	.029665427
13	140.00	0.6642E+04	.032135092
14	135.00	0.7260E+04	.035128836
15	130.00	0.8026E+04	.038832728
16	125.00	0.8911E+04	.043117233
17	120.00	0.9839E+04	.047604952
18	115.00	0.1089E+05	.052684180
19	110.00	0.1272E+05	.061561923
20	105.00	0.1600E+05	.077431791
21	100.00	0.1817E+05	.087897815
22	95.00	0.1638E+05	.079267561
23	90.00	0.1439E+05	.069619156
24	85.00	0.1180E+05	.057096247
25	80.00	0.8244E+04	.039886847
26	75.00	0.3808E+04	.018426867
27	70.00	0.5724E+03	.002769664
28	65.00	0.1528E+02	.000073948
29	60.00	0.6420E+01	.000031065
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.5070E+04
0.2000E+00	0.5019E+04
0.3000E+00	0.4933E+04
0.4000E+00	0.4880E+04
0.5000E+00	0.4829E+04
0.6000E+00	0.4796E+04
0.7000E+00	0.4728E+04
0.8000E+00	0.4674E+04
0.9000E+00	0.4622E+04
0.1000E+01	0.4555E+04
0.1100E+01	0.4503E+04
0.1200E+01	0.4466E+04
0.1300E+01	0.4425E+04
0.1400E+01	0.4393E+04
0.1500E+01	0.4332E+04
0.1600E+01	0.4284E+04
0.1700E+01	0.4244E+04
0.1800E+01	0.4182E+04
0.1900E+01	0.4145E+04

0.2000E+01	0.4114E+04
0.2100E+01	0.4079E+04
0.2200E+01	0.4048E+04
0.2300E+01	0.3999E+04
0.2400E+01	0.3948E+04
0.2500E+01	0.3909E+04
0.2600E+01	0.3846E+04
0.2700E+01	0.3825E+04
0.2800E+01	0.3798E+04
0.2900E+01	0.3776E+04
0.3000E+01	0.3740E+04
0.3100E+01	0.3705E+04
0.3200E+01	0.3662E+04
0.3300E+01	0.3618E+04
0.3400E+01	0.3578E+04
0.3500E+01	0.3519E+04
0.3600E+01	0.3497E+04
0.3700E+01	0.3480E+04
0.3800E+01	0.3466E+04
0.3900E+01	0.3434E+04
0.4000E+01	0.3406E+04
0.4100E+01	0.3357E+04
0.4200E+01	0.3325E+04
0.4300E+01	0.3283E+04
0.4400E+01	0.3223E+04
0.4500E+01	0.3197E+04
0.4600E+01	0.3181E+04
0.4700E+01	0.3166E+04
0.4800E+01	0.3155E+04
0.4900E+01	0.3124E+04
0.5000E+01	0.3095E+04
0.5100E+01	0.3048E+04
0.5200E+01	0.3014E+04
0.5300E+01	0.2979E+04

TOTAL OF AZ= 0.2067E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 7
 REACTION P4N PRODUCT FB52 Q-VALUE= 24.10 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 33.23 0.40 35.14 0.61 36.98 0.90 38.75 1.04 40.79 1.25
 42.67 1.34 44.53 1.37

THE TOTAL ACTIVATION IS 0.7878E+04 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.4697E+03	.059621602	10794.0
2 195.00	0.4540E+03	.057629809	11143.3
3 190.00	0.4391E+03	.055733275	11513.3
4 185.00	0.4249E+03	.053927839	11906.1
5 180.00	0.4113E+03	.052209448	12323.5
6 175.00	0.3984E+03	.050574288	12768.0
7 170.00	0.3862E+03	.049018897	13242.1
8 165.00	0.3745E+03	.047539599	13748.7
9 160.00	0.3635E+03	.046133183	14291.3
10 155.00	0.3529E+03	.044796247	14873.5
11 150.00	0.3429E+03	.043525483	15499.8
12 145.00	0.3334E+03	.042317547	16175.0
13 140.00	0.3243E+03	.041165847	16904.9
14 135.00	0.3156E+03	.040064119	17696.1
15 130.00	0.3073E+03	.039010122	18556.3
16 125.00	0.2994E+03	.038000777	19494.7
17 120.00	0.2917E+03	.037027698	20521.7
18 115.00	0.2842E+03	.036074650	21650.2
19 110.00	0.2769E+03	.035144027	22895.1
20 105.00	0.2691E+03	.034157436	24274.7
21 100.00	0.2422E+03	.030739417	25811.0
22 95.00	0.1914E+03	.024289817	26475.5
23 90.00	0.1432E+03	.018172484	27194.4
24 85.00	0.9850E+02	.012503137	27975.7
25 80.00	0.5768E+02	.007320918	28829.0
26 75.00	0.2183E+02	.002771441	29765.9
27 70.00	0.3960E+01	.000502607	30801.2
28 65.00	0.2225E+00	.000028241	31953.4

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.1930E+03
0.2000E+00	0.1910E+03
0.3000E+00	0.1890E+03
0.4000E+00	0.1869E+03
0.5000E+00	0.1849E+03
0.6000E+00	0.1830E+03
0.7000E+00	0.1809E+03
0.8000E+00	0.1789E+03
0.9000E+00	0.1771E+03
0.1000E+01	0.1755E+03
0.1100E+01	0.1735E+03
0.1200E+01	0.1717E+03
0.1300E+01	0.1698E+03
0.1400E+01	0.1681E+03
0.1500E+01	0.1662E+03
0.1600E+01	0.1645E+03
0.1700E+01	0.1628E+03
0.1800E+01	0.1613E+03
0.1900E+01	0.1595E+03
0.2000E+01	0.1578E+03
0.2100E+01	0.1562E+03
0.2200E+01	0.1546E+03
0.2300E+01	0.1529E+03
0.2400E+01	0.1513E+03
0.2500E+01	0.1498E+03
0.2600E+01	0.1483E+03
0.2700E+01	0.1469E+03
0.2800E+01	0.1452E+03
0.2900E+01	0.1437E+03
0.3000E+01	0.1422E+03
0.3100E+01	0.1406E+03
0.3200E+01	0.1392E+03
0.3300E+01	0.1378E+03
0.3400E+01	0.1364E+03
0.3500E+01	0.1350E+03
0.3600E+01	0.1337E+03
0.3700E+01	0.1323E+03
0.3800E+01	0.1308E+03
0.3900E+01	0.1294E+03
0.4000E+01	0.1280E+03
0.4100E+01	0.1267E+03
0.4200E+01	0.1255E+03
0.4300E+01	0.1242E+03
0.4400E+01	0.1229E+03
0.4500E+01	0.1217E+03
0.4600E+01	0.1205E+03
0.4700E+01	0.1191E+03
0.4800E+01	0.1178E+03
0.4900E+01	0.1164E+03
0.5000E+01	0.1152E+03
0.5100E+01	0.1141E+03
0.5200E+01	0.1130E+03
0.5300E+01	0.1118E+03

TOTAL OF AZ= 0.7878E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	MEV	MBS
18.28	0.11	20.22	0.20	22.05	3.47	23.75	11.80	25.77	21.30	13.20

27.04	23.50	27.68	27.10	29.19	28.90	29.66	32.00	31.22	32.20
33.23	32.20	35.14	29.20	36.98	25.70	38.75	22.10	40.79	18.70
42.67	16.40	44.53	14.60	49.00	11.90	52.90	11.00	58.10	9.90
63.00	21.50	79.00	33.40	89.20	27.90	98.90	24.20	108.00	22.40
116.50	20.90	125.10	20.10	133.40	19.20	141.30	18.30	148.90	17.70
154.90	17.30	160.90	16.80	166.20	16.40	166.90	16.40	172.70	16.00
178.40	15.50	183.90	15.30	189.30	15.00	194.50	14.70	199.80	14.40

THE TOTAL ACTIVATION IS 0.6157E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1150E+04	.018674258	10794.0
2 195.00	0.1216E+04	.019745624	11143.3
3 190.00	0.1287E+04	.020907003	11513.3
4 185.00	0.1363E+04	.022142828	11906.1
5 180.00	0.1446E+04	.023485508	12323.5
6 175.00	0.1536E+04	.024942944	12768.0
7 170.00	0.1637E+04	.026591070	13242.1
8 165.00	0.1752E+04	.028464409	13748.7
9 160.00	0.1880E+04	.030539481	14291.3
10 155.00	0.2018E+04	.032785799	14873.5
11 150.00	0.2178E+04	.035380647	15499.8
12 145.00	0.2367E+04	.038440239	16175.0
13 140.00	0.2601E+04	.042241398	16904.9
14 135.00	0.2907E+04	.047211282	17696.1
15 130.00	0.3306E+04	.053701717	18556.3
16 125.00	0.3712E+04	.060285375	19494.7
17 120.00	0.3939E+04	.063983306	20521.7
18 115.00	0.3850E+04	.062540807	21650.2
19 110.00	0.3475E+04	.056438349	22895.1
20 105.00	0.3099E+04	.050334796	24274.7
21 100.00	0.3233E+04	.052507091	25811.0
22 95.00	0.2870E+04	.046622131	26475.5
23 90.00	0.2409E+04	.039135680	27194.4
24 85.00	0.2173E+04	.035300359	27975.7
25 80.00	0.1884E+04	.030609202	28829.0
26 75.00	0.1453E+04	.023606719	29765.9
27 70.00	0.7375E+03	.011979439	30801.2
28 65.00	0.8583E+02	.001394192	31953.4
29 60.00	0.5057E+00	.000008214	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1508E+04
0.2000E+00	0.1484E+04
0.3000E+00	0.1459E+04
0.4000E+00	0.1453E+04
0.5000E+00	0.1439E+04
0.6000E+00	0.1431E+04
0.7000E+00	0.1408E+04
0.8000E+00	0.1380E+04
0.9000E+00	0.1361E+04
0.1000E+01	0.1346E+04
0.1100E+01	0.1345E+04
0.1200E+01	0.1336E+04
0.1300E+01	0.1328E+04
0.1400E+01	0.1307E+04
0.1500E+01	0.1277E+04
0.1600E+01	0.1261E+04
0.1700E+01	0.1259E+04
0.1800E+01	0.1248E+04
0.1900E+01	0.1240E+04

0.2000E+01	0.1231E+04
0.2100E+01	0.1215E+04
0.2200E+01	0.1198E+04
0.2300E+01	0.1179E+04
0.2400E+01	0.1168E+04
0.2500E+01	0.1166E+04
0.2600E+01	0.1154E+04
0.2700E+01	0.1149E+04
0.2800E+01	0.1138E+04
0.2900E+01	0.1124E+04
0.3000E+01	0.1108E+04
0.3100E+01	0.1087E+04
0.3200E+01	0.1076E+04
0.3300E+01	0.1077E+04
0.3400E+01	0.1080E+04
0.3500E+01	0.1068E+04
0.3600E+01	0.1058E+04
0.3700E+01	0.1049E+04
0.3800E+01	0.1032E+04
0.3900E+01	0.1013E+04
0.4000E+01	0.9966E+03
0.4100E+01	0.9860E+03
0.4200E+01	0.9872E+03
0.4300E+01	0.9904E+03
0.4400E+01	0.9826E+03
0.4500E+01	0.9826E+03
0.4600E+01	0.9702E+03
0.4700E+01	0.9566E+03
0.4800E+01	0.9399E+03
0.4900E+01	0.9178E+03
0.5000E+01	0.9073E+03
0.5100E+01	0.9040E+03
0.5200E+01	0.9030E+03
0.5300E+01	0.9038E+03

TOTAL OF AZ= 0.6157E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	REACTION	3P3M	MEV	PRODUCT	CR51	Q-VALUE=	10.00 MEV
MBS	MEV	MBS	MEV	MBS	MEV	MBS	MBS
13.43	1.09	15.18	1.72	16.79	2.24	18.28	2.53
22.05	1.46	23.75	1.07	25.77	0.65	27.04	0.29
29.19	0.55	29.66	0.97	31.22	3.50	33.23	15.10
36.98	53.20	38.75	68.70	40.79	84.10	42.67	94.50
49.00	70.00	52.90	71.60	58.10	52.80	63.00	43.00
89.20	70.80	98.90	70.10	108.00	67.30	116.50	65.50
133.40	63.60	141.30	60.70	148.90	60.10	154.90	59.30
166.20	58.10	166.90	56.90	172.70	56.70	178.40	55.50
189.30	54.90	194.50	54.60	199.80	54.10		

THE TOTAL ACTIVATION IS 0.1700E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	REACTIONAL ACTIVATION
MEV	NUCLEI PER DAY	
1	200.00	0.4079E+04
2	195.00	0.4288E+04
3	190.00	0.4501E+04
4	185.00	0.4729E+04
5	180.00	0.4943E+04
6	175.00	0.5176E+04
7	170.00	0.5463E+04
8	165.00	0.5775E+04
9	160.00	0.6114E+04
10	155.00	0.6455E+04
11	150.00	0.6814E+04
12	145.00	0.7237E+04
13	140.00	0.7714E+04
14	135.00	0.8205E+04
15	130.00	0.8553E+04
16	125.00	0.8661E+04
17	120.00	0.8471E+04
18	115.00	0.8174E+04
19	110.00	0.8554E+04
20	105.00	0.9836E+04
21	100.00	0.9762E+04

PROTON FLUX
PROTONS/DAY*CM**2
10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0

22	95.00	0.8562E+04	.050382081	26475.5
23	90.00	0.7389E+04	.043478411	27194.4
24	85.00	0.5689E+04	.033475149	27975.7
25	80.00	0.3572E+04	.021015629	28829.0
26	75.00	0.1070E+04	.006293379	29765.9
27	70.00	0.8683E+02	.000510884	30801.2
28	65.00	0.5798E+02	.000341148	31953.4
29	60.00	0.2145E+02	.000126223	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.4113E+04		
0.2000E+00		0.4078E+04		
0.3000E+00		0.4015E+04		
0.4000E+00		0.3962E+04		
0.5000E+00		0.3906E+04		
0.6000E+00		0.3873E+04		
0.7000E+00		0.3834E+04		
0.8000E+00		0.3813E+04		
0.9000E+00		0.3790E+04		
0.1000E+01		0.3771E+04		
0.1100E+01		0.3710E+04		
0.1200E+01		0.3656E+04		
0.1300E+01		0.3590E+04		
0.1400E+01		0.3552E+04		
0.1500E+01		0.3521E+04		
0.1600E+01		0.3505E+04		
0.1700E+01		0.3497E+04		
0.1800E+01		0.3487E+04		
0.1900E+01		0.3454E+04		
0.2000E+01		0.3399E+04		
0.2100E+01		0.3342E+04		
0.2200E+01		0.3290E+04		
0.2300E+01		0.3246E+04		
0.2400E+01		0.3226E+04		
0.2500E+01		0.3217E+04		
0.2600E+01		0.3206E+04		
0.2700E+01		0.3200E+04		
0.2800E+01		0.3177E+04		
0.2900E+01		0.3129E+04		
0.3000E+01		0.3077E+04		
0.3100E+01		0.3027E+04		
0.3200E+01		0.2986E+04		
0.3300E+01		0.2958E+04		
0.3400E+01		0.2943E+04		
0.3500E+01		0.2933E+04		
0.3600E+01		0.2925E+04		
0.3700E+01		0.2911E+04		
0.3800E+01		0.2897E+04		
0.3900E+01		0.2845E+04		
0.4000E+01		0.2805E+04		
0.4100E+01		0.2759E+04		
0.4200E+01		0.2726E+04		
0.4300E+01		0.2696E+04		
0.4400E+01		0.2681E+04		
0.4500E+01		0.2666E+04		
0.4600E+01		0.2655E+04		
0.4700E+01		0.2641E+04		
0.4800E+01		0.2632E+04		
0.4900E+01		0.2597E+04		
0.5000E+01		0.2559E+04		
0.5100E+01		0.2519E+04		

0.5200E+01 0.2488E+04
 0.5300E+01 0.2460E+04
 TOTAL OF AZ= 0.1700E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 27
 REACTION 4P5N PRODUCT V48 Q-VALUE= 35.00 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 38.75 0.24 40.79 0.73 42.67 1.58 44.53 2.62 49.00 3.90
 52.90 5.20 58.10 5.60 63.00 4.90 79.00 6.63 89.20 12.80
 98.90 15.20 108.00 15.30 116.50 15.20 125.10 15.70 133.40 16.20
 141.30 16.10 148.90 16.50 154.90 17.00 160.90 16.20 166.20 17.10
 166.90 16.30 172.70 16.30 178.40 16.20 183.90 16.30 189.30 16.40
 194.50 16.80 199.80 17.00

THE TOTAL ACTIVATION IS 0.2909E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
1 200.00	0.1182E+04	.040632606
2 195.00	0.1230E+04	.042283788
3 190.00	0.1280E+04	.043988138
4 185.00	0.1335E+04	.045884352
5 180.00	0.1373E+04	.047184635
6 175.00	0.1413E+04	.048553132
7 170.00	0.1446E+04	.049711086
8 165.00	0.1486E+04	.051083174
9 160.00	0.1527E+04	.052494220
10 155.00	0.1564E+04	.053749446
11 150.00	0.1606E+04	.055210635
12 145.00	0.1661E+04	.057102520
13 140.00	0.1714E+04	.058906753
14 135.00	0.1724E+04	.059259057
15 130.00	0.1618E+04	.055625990
16 125.00	0.1427E+04	.049065027
17 120.00	0.1209E+04	.041553032
18 115.00	0.1008E+04	.034631774
19 110.00	0.8848E+03	.030412329
20 105.00	0.7787E+03	.026764994
21 100.00	0.6312E+03	.021696288
22 95.00	0.4721E+03	.016227027
23 90.00	0.3194E+03	.010980019
24 85.00	0.1582E+03	.005437780
25 80.00	0.4377E+02	.001504578
26 75.00	0.1673E+01	.000057507
27 70.00	0.0000E+00	.000000000
28 65.00	0.0000E+00	.000000000
29 60.00	0.0000E+00	.000000000
30 55.00	0.0000E+00	.000000000
31 50.00	0.0000E+00	.000000000
32 45.00	0.0000E+00	.000000000
33 40.00	0.0000E+00	.000000000
34 35.00	0.0000E+00	.000000000
35 30.00	0.0000E+00	.000000000
36 25.00	0.0000E+00	.000000000
37 20.00	0.0000E+00	.000000000
38 15.00	0.0000E+00	.000000000
39 10.00	0.0000E+00	.000000000
40 5.00	0.0000E+00	.000000000

PROTON FLUX
 PROTONS/DAY*CM**2
 10794.0
 11143.3
 11513.3
 11906.1
 12323.5
 12768.0
 13242.1
 13748.7
 14291.3
 14873.5
 15499.8
 16175.0
 16904.9
 17696.1
 18556.3
 19494.7
 20521.7
 21650.2
 22895.1
 24274.7
 25811.0
 26475.5
 27194.4
 27975.7
 28829.0
 29765.9
 30801.2
 31953.4
 33246.3
 34711.2
 36390.0
 37815.7
 39475.7
 41445.9
 43843.0
 47588.0
 52609.5
 59873.0
 86539.0
 111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.6934E+03
0.2000E+00	0.6870E+03
0.3000E+00	0.6794E+03
0.4000E+00	0.6725E+03
0.5000E+00	0.6654E+03
0.6000E+00	0.6591E+03
0.7000E+00	0.6530E+03
0.8000E+00	0.6477E+03
0.9000E+00	0.6425E+03
0.1000E+01	0.6373E+03
0.1100E+01	0.6308E+03
0.1200E+01	0.6242E+03
0.1300E+01	0.6171E+03
0.1400E+01	0.6112E+03

0.1500E+01	0.6055E+03
0.1600E+01	0.6004E+03
0.1700E+01	0.5955E+03
0.1800E+01	0.5910E+03
0.1900E+01	0.5861E+03
0.2000E+01	0.5804E+03
0.2100E+01	0.5746E+03
0.2200E+01	0.5687E+03
0.2300E+01	0.5634E+03
0.2400E+01	0.5581E+03
0.2500E+01	0.5531E+03
0.2600E+01	0.5484E+03
0.2700E+01	0.5441E+03
0.2800E+01	0.5395E+03
0.2900E+01	0.5338E+03
0.3000E+01	0.5281E+03
0.3100E+01	0.5226E+03
0.3200E+01	0.5174E+03
0.3300E+01	0.5125E+03
0.3400E+01	0.5078E+03
0.3500E+01	0.5043E+03
0.3600E+01	0.5013E+03
0.3700E+01	0.4974E+03
0.3800E+01	0.4932E+03
0.3900E+01	0.4875E+03
0.4000E+01	0.4824E+03
0.4100E+01	0.4773E+03
0.4200E+01	0.4723E+03
0.4300E+01	0.4675E+03
0.4400E+01	0.4631E+03
0.4500E+01	0.4591E+03
0.4600E+01	0.4555E+03
0.4700E+01	0.4523E+03
0.4800E+01	0.4493E+03
0.4900E+01	0.4451E+03
0.5000E+01	0.4402E+03
0.5100E+01	0.4353E+03
0.5200E+01	0.4308E+03
0.5300E+01	0.4270E+03

TOTAL OF AZ= 0.2909E+05
 PHYLAIRD job terminated at 29-MAY-1991 12:05:22.82

Accounting information:

Buffered I/O count:	99	Peak working set size:	477
Direct I/O count:	184	Peak page file size:	2527
Page faults:	705	Mounted volumes:	0
Charged CPU time:	0 00:00:03.94	Elapsed time:	0 00:00:43.03

\$run ptrap4
 ENTER THE NAME OF THE DATA FILE BEING USED
 PFED

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    THE TARGET IS      FE
    TM,C,AND A ARE      55.847  148.000  3.000
    NCM= 10  NQM= 2  NMC= 3
    THE COVERING MATERIAL IS ALUM
    TC,CC, AND AC ARE      27.000  184.000  5.400
    THICKNESS OF COVERING MATERIAL 0.00
    THE INELASTIC XSECTIONS FOR COVERING
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
    60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
    THE INELASTIC XSECTIONS OF THE TARGET
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    20.001611.00 25.001617.00 30.001649.00 35.001703.00 40.001740.00
    50.001748.00 60.001776.00 100.001662.00 225.001600.00 340.001626.00
    TARGET THICKNESS 5.271 GM/CM**2  WIDTH 5.080CM  LENGTH 5.080 CM
    INITIAL THETA 0.0  FINAL THETA 89.0  INCREMENT 11.0
    INITIAL PHI 0.0  FINAL PHI 0.0  INCREMENT 1.0
    200.00 5.00 5.00 0.100 8
    THE NUMBER OF REACTIONS EQUAL 8
    THE NUMBER OF PROTON FLUX DATA POINTS IS 15
    MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
    1.0 211010.0  1.5 129570.0  2.0 120000.0  2.5 120000.0  3.0 113220.0
    3.7 113180.0  4.5 113430.0  6.0 108220.0  10.0 86539.0  15.0 59873.0
    30.0 43843.0  50.0 36390.0  100.0 25811.0  200.0 10794.0  300.0 4017.6
    THE NUMBER OF CROSS SECTION DATA POINTS IS 37
    REACTION  PRODUCT  CO57  Q-VALUE= 1.60 MEV
    MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
    13.43 7.64 15.18 5.05 16.79 3.92 18.28 3.41 20.22 2.57
    22.05 2.31 23.75 1.87 25.77 1.50 27.04 1.38 27.68 1.17
    29.19 1.04 29.66 0.88 31.22 0.83 33.23 0.66 35.14 0.60
    38.75 0.50 42.67 0.41 44.50 0.36 79.00 0.34 89.20 0.30
    98.90 0.26 108.00 0.25 116.50 0.23 125.10 0.22 133.40 0.21
    141.30 0.20 148.90 0.21 154.90 0.19 160.90 0.18 166.20 0.14
    166.90 0.18 172.70 0.17 178.40 0.17 183.90 0.16 189.30 0.16
    194.50 0.15 199.80 0.14
    THE TOTAL ACTIVATION IS 0.1466E+05 NUCLEI /DAY
    PROTON PARTIAL FRACTIONAL PROTON
    ENERGY ACTIVATION ACTIVATION FLUX
    MEV  NUCLEI PER DAY
    1 200.00 0.8045E+02 .005487844 10794.0
    2 195.00 0.8168E+02 .004207707 11143.3
    3 190.00 0.4982E+02 .003398618 11513.3
    4 185.00 0.5313E+02 .003624240 11906.1
    5 180.00 0.7792E+02 .005315198 12323.5
    6 175.00 0.6009E+02 .004098813 12768.0
    7 170.00 0.6315E+02 .004307468 13242.1
    8 165.00 0.1024E+03 .006985278 13748.7
    9 160.00 0.1728E+03 .011785811 14291.3
    10 155.00 0.1546E+03 .010546218 14873.5
    11 150.00 0.1152E+03 .007860354 15499.8
    12 145.00 0.1294E+03 .008823718 16175.0
    13 140.00 0.1204E+03 .008214712 16904.9
    14 135.00 0.1516E+03 .010339919 17696.1
    15 130.00 0.1590E+03 .010849098 18556.3
    16 125.00 0.3499E+03 .023868853 19494.7
    17 120.00 0.4531E+03 .030908749 20521.7
    18 115.00 0.3171E+03 .021630812 21650.2
    19 110.00 0.5830E+03 .039770763 22895.1
    20 105.00 0.4805E+03 .032776155 24274.7
    21 100.00 0.3690E+03 .025170363 25811.0
    22 95.00 0.9855E+03 .067222476 26475.5
    23 90.00 0.6951E+03 .047412850 27194.4
    24 85.00 0.1868E+04 .127398267 27975.7
    25 80.00 0.7254E+03 .049482256 28829.0
    26 75.00 0.1312E+04 .089488216 29765.9
    27 70.00 0.1132E+04 .077219293 30801.2
    28 65.00 0.1229E+04 .083826765 31953.4
    29 60.00 0.1417E+04 .096672647 33246.3
    30 55.00 0.1192E+04 .081306450 34711.2
  
```

31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.1093E+04
0.2000E+00	0.9905E+03
0.3000E+00	0.1144E+04
0.4000E+00	0.5274E+03
0.5000E+00	0.6057E+03
0.6000E+00	0.6169E+03
0.7000E+00	0.6210E+03
0.8000E+00	0.3346E+03
0.9000E+00	0.2997E+03
0.1000E+01	0.3833E+03
0.1100E+01	0.4271E+03
0.1200E+01	0.3785E+03
0.1300E+01	0.2528E+03
0.1400E+01	0.2553E+03
0.1500E+01	0.1824E+03
0.1600E+01	0.2279E+03
0.1700E+01	0.3417E+03
0.1800E+01	0.4056E+03
0.1900E+01	0.8636E+02
0.2000E+01	0.1230E+03
0.2100E+01	0.2727E+03
0.2200E+01	0.8077E+02
0.2300E+01	0.2155E+03
0.2400E+01	0.4718E+03
0.2500E+01	0.2221E+03
0.2600E+01	0.1766E+03
0.2700E+01	0.1003E+03
0.2800E+01	0.1218E+03
0.2900E+01	0.1897E+03
0.3000E+01	0.2241E+03
0.3100E+01	0.1125E+03
0.3200E+01	0.1400E+03
0.3300E+01	0.1182E+03
0.3400E+01	0.2253E+03
0.3500E+01	0.1891E+03
0.3600E+01	0.8655E+02
0.3700E+01	0.1765E+03
0.3800E+01	0.7669E+02
0.3900E+01	0.2111E+03
0.4000E+01	0.1560E+03
0.4100E+01	0.3433E+03
0.4200E+01	0.1457E+03
0.4300E+01	0.1471E+03
0.4400E+01	0.4231E+02
0.4500E+01	0.7314E+02
0.4600E+01	0.2448E+03
0.4700E+01	0.9024E+02
0.4800E+01	0.6685E+02
0.4900E+01	0.1564E+03
0.5000E+01	0.1827E+03
0.5100E+01	0.1160E+03
0.5200E+01	0.1342E+03
0.5300E+01	0.4681E+02

TOTAL OF AZ= 0.1465E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
5.80	21.70	13.43	342.00	15.18	314.00	16.79	202.00	18.23	127.00		
20.22	69.00	22.05	46.10	23.75	36.20	25.77	29.40	27.04	27.00		
27.68	24.90	29.19	23.00	29.66	21.90	31.22	20.40	33.23	18.30		

Q-VALUE= 5.40 MEV

35.14	17.00	36.98	16.00	38.75	14.80	40.79	13.80	42.67	13.30
44.53	12.31	79.00	7.09	89.20	5.99	98.90	4.91	108.00	4.43
116.50	4.06	125.10	3.74	133.40	3.51	141.30	3.24	148.90	3.10
154.90	3.13	160.90	2.98	166.20	2.45	166.90	2.87	172.70	2.78
178.40	2.61	183.90	2.53	189.30	2.49	194.50	2.32	199.80	2.10

THE TOTAL ACTIVATION IS 0.8451E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6283E+03	.007435350	10794.0
2 195.00	0.6653E+03	.007872597	11143.3
3 190.00	0.7059E+03	.008353153	11513.3
4 185.00	0.7507E+03	.008883655	11906.1
5 180.00	0.8077E+03	.009557365	12323.5
6 175.00	0.8657E+03	.010244053	12768.0
7 170.00	0.9403E+03	.011126672	13242.1
8 165.00	0.1191E+04	.014091079	13748.7
9 160.00	0.1260E+04	.014915179	14291.3
10 155.00	0.1342E+04	.015879942	14873.5
11 150.00	0.1437E+04	.017006373	15499.8
12 145.00	0.1549E+04	.018328073	16175.0
13 140.00	0.1662E+04	.019669712	16904.9
14 135.00	0.1827E+04	.021616569	17696.1
15 130.00	0.2061E+04	.024391647	18556.3
16 125.00	0.2453E+04	.029027864	19494.7
17 120.00	0.2663E+04	.031515069	20521.7
18 115.00	0.2946E+04	.034865201	21650.2
19 110.00	0.3508E+04	.041514125	22895.1
20 105.00	0.4059E+04	.048037264	24274.7
21 100.00	0.4730E+04	.055976097	25811.0
22 95.00	0.5935E+04	.070227288	26475.5
23 90.00	0.6323E+04	.074821554	27194.4
24 85.00	0.6228E+04	.073698685	27975.7
25 80.00	0.6157E+04	.072857708	28829.0
26 75.00	0.6010E+04	.071117163	29765.9
27 70.00	0.5850E+04	.069222845	30801.2
28 65.00	0.5467E+04	.064691611	31953.4
29 60.00	0.4192E+04	.049603470	33246.3
30 55.00	0.2918E+03	.003452614	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM

ACTIVATION NUCLEI/DAY

0.1000E+00	0.6563E+04
0.2000E+00	0.5408E+04
0.3000E+00	0.4642E+04
0.4000E+00	0.3216E+04
0.5000E+00	0.3387E+04
0.6000E+00	0.3224E+04
0.7000E+00	0.2958E+04
0.8000E+00	0.2392E+04
0.9000E+00	0.2449E+04
0.1000E+01	0.1813E+04
0.1100E+01	0.2376E+04
0.1200E+01	0.1777E+04
0.1300E+01	0.2034E+04
0.1400E+01	0.1418E+04
0.1500E+01	0.1557E+04
0.1600E+01	0.1459E+04
0.1700E+01	0.1391E+04
0.1800E+01	0.1371E+04
0.1900E+01	0.1361E+04
0.2000E+01	0.1367E+04
0.2100E+01	0.1509E+04

0.2200E+01	0.1405E+04
0.2300E+01	0.9673E+03
0.2400E+01	0.9310E+03
0.2500E+01	0.1134E+04
0.2600E+01	0.1636E+04
0.2700E+01	0.1418E+04
0.2800E+01	0.9306E+03
0.2900E+01	0.8735E+03
0.3000E+01	0.1042E+04
0.3100E+01	0.1269E+04
0.3200E+01	0.9019E+03
0.3300E+01	0.1010E+04
0.3400E+01	0.9481E+03
0.3500E+01	0.1029E+04
0.3600E+01	0.1048E+04
0.3700E+01	0.1037E+04
0.3800E+01	0.8291E+03
0.3900E+01	0.1061E+04
0.4000E+01	0.8546E+03
0.4100E+01	0.6377E+03
0.4200E+01	0.9105E+03
0.4300E+01	0.7841E+03
0.4400E+01	0.1030E+04
0.4500E+01	0.9212E+03
0.4600E+01	0.8459E+03
0.4700E+01	0.7871E+03
0.4800E+01	0.6088E+03
0.4900E+01	0.8691E+03
0.5000E+01	0.6515E+03
0.5100E+01	0.6571E+03
0.5200E+01	0.7618E+03
0.5300E+01	0.7649E+03

TOTAL OF AZ= 0.8423E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 20

REACTION	2N	PRODUCT	C055	Q-VALUE=	15.50 MEV
MEV MBS	MEV MBS	MEV MBS	MEV MBS	MEV MBS	MBS
13.43	0.02	15.18	0.03	16.79	4.67
22.05	55.50	23.75	61.80	25.77	64.30
29.19	48.90	29.66	44.50	31.22	35.70
36.98	16.70	38.75	14.00	40.79	12.30
					42.67
					11.00
					44.53
					10.30

THE TOTAL ACTIVATION IS 0.3542E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.1364E+03	.003850768
2	195.00	0.1509E+03	.004260681
3	190.00	0.1674E+03	.004726692
4	185.00	0.1882E+03	.005313081
5	180.00	0.2147E+03	.006060827
6	175.00	0.2491E+03	.007032027
7	170.00	0.3077E+03	.008686725
8	165.00	0.4064E+03	.011473041
9	160.00	0.4427E+03	.012499159
10	155.00	0.4882E+03	.013782687
11	150.00	0.5408E+03	.015267580
12	145.00	0.6063E+03	.017116109
13	140.00	0.6861E+03	.019369267
14	135.00	0.7976E+03	.022519132
15	130.00	0.1021E+04	.028822448
16	125.00	0.1145E+04	.032318745
17	120.00	0.1306E+04	.036861289
18	115.00	0.1613E+04	.045533534
19	110.00	0.1865E+04	.052652590
20	105.00	0.2264E+04	.063918293
21	100.00	0.2804E+04	.079154000
22	95.00	0.3158E+04	.089144684
23	90.00	0.3103E+04	.087611824
24	85.00	0.3005E+04	.084842131
25	80.00	0.2859E+04	.080725968
26	75.00	0.2653E+04	.074886896
27	70.00	0.2210E+04	.062382396
28	65.00	0.1027E+04	.028987052

29	60.00	0.7095E+01	.000200322	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.2466E+04	
0.2000E+00	0.2070E+04	
0.3000E+00	0.1914E+04	
0.4000E+00	0.1455E+04	
0.5000E+00	0.1447E+04	
0.6000E+00	0.1284E+04	
0.7000E+00	0.1189E+04	
0.8000E+00	0.1011E+04	
0.9000E+00	0.1030E+04	
0.1000E+01	0.8781E+03	
0.1100E+01	0.9774E+03	
0.1200E+01	0.7240E+03	
0.1300E+01	0.7438E+03	
0.1400E+01	0.6898E+03	
0.1500E+01	0.5717E+03	
0.1600E+01	0.7225E+03	
0.1700E+01	0.5545E+03	
0.1800E+01	0.6721E+03	
0.1900E+01	0.5137E+03	
0.2000E+01	0.5102E+03	
0.2100E+01	0.6480E+03	
0.2200E+01	0.5112E+03	
0.2300E+01	0.5347E+03	
0.2400E+01	0.5427E+03	
0.2500E+01	0.4720E+03	
0.2600E+01	0.5739E+03	
0.2700E+01	0.4867E+03	
0.2800E+01	0.4157E+03	
0.2900E+01	0.5393E+03	
0.3000E+01	0.4247E+03	
0.3100E+01	0.4680E+03	
0.3200E+01	0.4533E+03	
0.3300E+01	0.4295E+03	
0.3400E+01	0.4534E+03	
0.3500E+01	0.4114E+03	
0.3600E+01	0.3877E+03	
0.3700E+01	0.4083E+03	
0.3800E+01	0.4174E+03	
0.3900E+01	0.4063E+03	
0.4000E+01	0.3760E+03	
0.4100E+01	0.3923E+03	
0.4200E+01	0.4495E+03	
0.4300E+01	0.3057E+03	
0.4400E+01	0.3758E+03	
0.4500E+01	0.3306E+03	
0.4600E+01	0.3426E+03	
0.4700E+01	0.3785E+03	
0.4800E+01	0.3674E+03	
0.4900E+01	0.3185E+03	
0.5000E+01	0.3101E+03	
0.5100E+01	0.3532E+03	
0.5200E+01	0.3711E+03	
0.5300E+01	0.2865E+03	

TOTAL OF AZ= 0.3536E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 39

REACTION	P, A	PRODUCT	MN54	Q-VALUE=	12.73 MEV
MEV	MBS	MEV	MBS	MEV	MBS
16.79	0.54	18.28	0.57	20.22	0.36
				22.05	0.26
				23.75	0.48

25.77	1.73	27.04	4.83	27.68	9.20	23.19	22.00	29.66	34.80
31.22	55.70	33.23	92.70	35.14	123.00	36.98	145.00	38.75	157.00
40.79	167.00	42.87	163.00	44.53	157.00	58.10	87.30	63.00	77.90
79.00	74.60	89.20	66.60	98.90	61.10	108.00	57.40	116.50	55.00
125.10	53.00	133.40	51.80	141.30	49.00	148.90	48.00	154.90	46.60
160.90	45.70	166.20	44.30	166.90	44.60	172.70	44.10	178.40	42.50
183.90	41.80	189.30	41.90	194.50	41.00	199.80	40.40		

THE TOTAL ACTIVATION IS 0.3106E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.7264E+04	.023388067
2	195.00	0.7579E+04	.024403194
3	190.00	0.7915E+04	.025487227
4	185.00	0.8281E+04	.026664063
5	180.00	0.8688E+04	.027972236
6	175.00	0.9189E+04	.029587351
7	170.00	0.9778E+04	.031481542
8	165.00	0.1014E+05	.032632604
9	160.00	0.1052E+05	.033887811
10	155.00	0.1094E+05	.035224356
11	150.00	0.1139E+05	.036673058
12	145.00	0.1192E+05	.038369272
13	140.00	0.1261E+05	.040603541
14	135.00	0.1349E+05	.043442763
15	130.00	0.1414E+05	.045541678
16	125.00	0.1487E+05	.047880970
17	120.00	0.1578E+05	.050804581
18	115.00	0.1658E+05	.053369708
19	110.00	0.1758E+05	.056603733
20	105.00	0.1846E+05	.059437674
21	100.00	0.1825E+05	.058747336
22	95.00	0.1639E+05	.052756760
23	90.00	0.1439E+05	.046328072
24	85.00	0.1180E+05	.037994698
25	80.00	0.8244E+04	.026542669
26	75.00	0.3808E+04	.012262147
27	70.00	0.5724E+03	.001843073
28	65.00	0.1528E+02	.000049208
29	60.00	0.6420E+01	.000020672
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON
FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.2034E+05
0.2000E+00	0.1772E+05
0.3000E+00	0.1632E+05
0.4000E+00	0.1251E+05
0.5000E+00	0.1248E+05
0.6000E+00	0.1122E+05
0.7000E+00	0.1019E+05
0.8000E+00	0.8441E+04
0.9000E+00	0.8489E+04
0.1000E+01	0.7061E+04
0.1100E+01	0.7872E+04
0.1200E+01	0.5723E+04
0.1300E+01	0.6397E+04
0.1400E+01	0.6043E+04
0.1500E+01	0.5189E+04
0.1600E+01	0.6266E+04
0.1700E+01	0.4997E+04
0.1800E+01	0.5950E+04
0.1900E+01	0.4792E+04

0.2000E+01	0.4653E+04
0.2100E+01	0.5715E+04
0.2200E+01	0.4856E+04
0.2300E+01	0.4648E+04
0.2400E+01	0.4716E+04
0.2500E+01	0.4472E+04
0.2600E+01	0.5405E+04
0.2700E+01	0.4591E+04
0.2800E+01	0.3690E+04
0.2900E+01	0.4655E+04
0.3000E+01	0.4076E+04
0.3100E+01	0.4447E+04
0.3200E+01	0.3973E+04
0.3300E+01	0.3960E+04
0.3400E+01	0.4125E+04
0.3500E+01	0.3815E+04
0.3600E+01	0.3683E+04
0.3700E+01	0.3797E+04
0.3800E+01	0.3628E+04
0.3900E+01	0.3873E+04
0.4000E+01	0.3494E+04
0.4100E+01	0.3329E+04
0.4200E+01	0.4056E+04
0.4300E+01	0.2943E+04
0.4400E+01	0.3563E+04
0.4500E+01	0.3104E+04
0.4600E+01	0.3153E+04
0.4700E+01	0.3267E+04
0.4800E+01	0.3157E+04
0.4900E+01	0.3124E+04
0.5000E+01	0.2844E+04
0.5100E+01	0.2982E+04
0.5200E+01	0.3353E+04
0.5300E+01	0.2819E+04

TOTAL OF AZ= 0.3100E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 7
 REACTION P4N PRODUCT FE52 Q-VALUE= 24.10 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS
 33.23 0.40 35.14 0.61 36.98 0.90 38.75 1.04 40.79 1.25
 42.67 1.34 44.53 1.37

THE TOTAL ACTIVATION IS 0.1133E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.7874E+03	.069510110	10794.0
2 195.00	0.7550E+03	.066652112	11143.3
3 190.00	0.7241E+03	.063917689	11513.3
4 185.00	0.6944E+03	.061298832	11906.1
5 180.00	0.6659E+03	.058788035	12323.5
6 175.00	0.6387E+03	.056381237	12768.0
7 170.00	0.6118E+03	.054007709	13242.1
8 165.00	0.5844E+03	.051589828	13748.7
9 160.00	0.5581E+03	.049265664	14291.3
10 155.00	0.5328E+03	.047034040	14873.5
11 150.00	0.5085E+03	.044888537	15499.8
12 145.00	0.4851E+03	.042821709	16175.0
13 140.00	0.4625E+03	.040828116	16904.9
14 135.00	0.4401E+03	.038851708	17696.1
15 130.00	0.4161E+03	.036727950	18556.3
16 125.00	0.3924E+03	.034637332	19494.7
17 120.00	0.3688E+03	.032552753	20521.7
18 115.00	0.3430E+03	.030275203	21650.2
19 110.00	0.3153E+03	.027834592	22895.1
20 105.00	0.2837E+03	.025042415	24274.7
21 100.00	0.2433E+03	.021478912	25811.0
22 95.00	0.1914E+03	.016892973	26475.5
23 90.00	0.1422E+03	.012638520	27194.4
24 85.00	0.9850E+02	.008695627	27975.7
25 80.00	0.5768E+02	.005091515	28829.0
26 75.00	0.2183E+02	.001927469	29765.9
27 70.00	0.3960E+01	.000349551	30801.2
28 65.00	0.2225E+00	.000019641	31953.4

29	60.00	0.0000E+00	.0000000000	33246.3
30	55.00	0.0000E+00	.0000000000	34711.2
31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH

GRAMS/SQ CM

ACTIVATION

NUCLEI/DAY

0.1000E+00	0.7781E+03
0.2000E+00	0.6724E+03
0.3000E+00	0.6118E+03
0.4000E+00	0.4569E+03
0.5000E+00	0.4478E+03
0.6000E+00	0.3958E+03
0.7000E+00	0.3532E+03
0.8000E+00	0.2873E+03
0.9000E+00	0.2925E+03
0.1000E+01	0.2420E+03
0.1100E+01	0.2806E+03
0.1200E+01	0.2093E+03
0.1300E+01	0.2442E+03
0.1400E+01	0.2292E+03
0.1500E+01	0.1979E+03
0.1600E+01	0.2372E+03
0.1700E+01	0.1891E+03
0.1800E+01	0.2250E+03
0.1900E+01	0.1807E+03
0.2000E+01	0.1751E+03
0.2100E+01	0.2144E+03
0.2200E+01	0.1818E+03
0.2300E+01	0.1734E+03
0.2400E+01	0.1753E+03
0.2500E+01	0.1658E+03
0.2600E+01	0.2025E+03
0.2700E+01	0.1692E+03
0.2800E+01	0.1360E+03
0.2900E+01	0.1708E+03
0.3000E+01	0.1484E+03
0.3100E+01	0.1639E+03
0.3200E+01	0.1446E+03
0.3300E+01	0.1439E+03
0.3400E+01	0.1494E+03
0.3500E+01	0.1380E+03
0.3600E+01	0.1320E+03
0.3700E+01	0.1379E+03
0.3800E+01	0.1300E+03
0.3900E+01	0.1383E+03
0.4000E+01	0.1248E+03
0.4100E+01	0.1177E+03
0.4200E+01	0.1445E+03
0.4300E+01	0.1028E+03
0.4400E+01	0.1267E+03
0.4500E+01	0.1085E+03
0.4600E+01	0.1107E+03
0.4700E+01	0.1160E+03
0.4800E+01	0.1084E+03
0.4900E+01	0.1089E+03
0.5000E+01	0.9810E+02
0.5100E+01	0.1042E+03
0.5200E+01	0.1160E+03
0.5300E+01	0.9652E+02

TOTAL OF AZ= 0.1131E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION He3 PRODUCT MN52 Q-VALUE= 13.20 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
18.28	0.11	20.22	0.20	22.05	3.47	23.75	11.80	25.77	21.30

27.04	23.50	27.68	27.10	29.19	28.90	29.66	32.00	31.22	32.20
33.23	32.20	35.14	29.20	36.98	25.70	38.75	22.10	40.79	18.70
42.67	16.40	44.53	14.60	49.00	11.90	52.90	11.00	58.10	9.90
63.00	21.50	79.00	33.40	89.20	27.90	98.90	24.20	108.00	22.40
116.50	20.90	125.10	20.10	133.40	19.20	141.30	18.30	148.90	17.70
154.90	17.30	160.90	16.80	166.20	16.40	166.90	16.40	172.70	16.00
178.40	15.50	183.90	15.30	189.30	15.00	194.50	14.70	199.80	14.40

THE TOTAL ACTIVATION IS 0.9265E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.2615E+04	.028225856
2	195.00	0.2737E+04	.029541317
3	190.00	0.2874E+04	.031020597
4	185.00	0.3015E+04	.032540649
5	180.00	0.3147E+04	.033965237
6	175.00	0.3272E+04	.035317384
7	170.00	0.3433E+04	.037053842
8	165.00	0.3582E+04	.038665283
9	160.00	0.3732E+04	.040284932
10	155.00	0.3900E+04	.042096682
11	150.00	0.4074E+04	.043969508
12	145.00	0.4249E+04	.045866173
13	140.00	0.4443E+04	.047954015
14	135.00	0.4679E+04	.050508186
15	130.00	0.4899E+04	.052878663
16	125.00	0.4987E+04	.053829104
17	120.00	0.4951E+04	.053441603
18	115.00	0.4731E+04	.051069796
19	110.00	0.4344E+04	.046891820
20	105.00	0.3866E+04	.041729439
21	100.00	0.3500E+04	.037780769
22	95.00	0.2870E+04	.030983351
23	90.00	0.2409E+04	.026006836
24	85.00	0.2173E+04	.023458170
25	80.00	0.1884E+04	.020340748
26	75.00	0.1453E+04	.015687374
27	70.00	0.7375E+03	.007960704
28	65.00	0.8583E+02	.000926483
29	60.00	0.5057E+00	.000005459
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.6045E+04
0.2000E+00	0.5287E+04
0.3000E+00	0.4886E+04
0.4000E+00	0.3760E+04
0.5000E+00	0.3734E+04
0.6000E+00	0.3348E+04
0.7000E+00	0.3021E+04
0.8000E+00	0.2487E+04
0.9000E+00	0.2482E+04
0.1000E+01	0.2025E+04
0.1100E+01	0.2264E+04
0.1200E+01	0.1695E+04
0.1300E+01	0.1916E+04
0.1400E+01	0.1794E+04
0.1500E+01	0.1556E+04
0.1600E+01	0.1867E+04
0.1700E+01	0.1491E+04
0.1800E+01	0.1781E+04
0.1900E+01	0.1437E+04

0.2000E+01	0.1399E+04
0.2100E+01	0.1704E+04
0.2200E+01	0.1459E+04
0.2300E+01	0.1392E+04
0.2400E+01	0.1400E+04
0.2500E+01	0.1348E+04
0.2600E+01	0.1625E+04
0.2700E+01	0.1382E+04
0.2800E+01	0.1115E+04
0.2900E+01	0.1379E+04
0.3000E+01	0.1214E+04
0.3100E+01	0.1347E+04
0.3200E+01	0.1191E+04
0.3300E+01	0.1189E+04
0.3400E+01	0.1248E+04
0.3500E+01	0.1143E+04
0.3600E+01	0.1101E+04
0.3700E+01	0.1150E+04
0.3800E+01	0.1085E+04
0.3900E+01	0.1157E+04
0.4000E+01	0.1058E+04
0.4100E+01	0.9981E+03
0.4200E+01	0.1206E+04
0.4300E+01	0.8836E+03
0.4400E+01	0.1079E+04
0.4500E+01	0.9345E+03
0.4600E+01	0.9529E+03
0.4700E+01	0.9875E+03
0.4800E+01	0.9357E+03
0.4900E+01	0.9335E+03
0.5000E+01	0.8572E+03
0.5100E+01	0.8974E+03
0.5200E+01	0.9944E+03
0.5300E+01	0.8393E+03

TOTAL OF AZ= 0.9246E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE= 10.00 MEV
13.43	1.09	15.18	1.72	16.79	2.24	18.28	2.53	20.22	2.33	
22.05	1.46	23.75	1.07	25.77	0.65	27.04	0.29	27.68	0.43	
29.19	0.55	29.66	0.97	31.22	3.50	33.23	15.10	35.14	33.00	
36.98	53.20	38.75	68.70	40.79	84.10	42.67	94.50	44.53	100.20	
49.00	70.00	52.90	71.60	58.10	52.80	63.00	43.00	79.00	61.40	
89.20	70.80	98.90	70.10	108.00	67.30	116.50	65.50	125.10	64.30	
133.40	63.60	141.30	60.70	148.90	60.10	154.90	59.30	160.90	58.90	
166.20	58.10	166.90	56.90	172.70	56.70	178.40	55.50	183.90	55.00	
189.30	54.90	194.50	54.60	199.80	54.10					

THE TOTAL ACTIVATION IS 0.2542E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.8734E+04	0.034358248
2	195.00	0.9043E+04	0.035573717
3	190.00	0.9350E+04	0.036780663
4	185.00	0.9653E+04	0.037971873
5	180.00	0.9931E+04	0.039064631
6	175.00	0.1028E+05	0.040424582
7	170.00	0.1064E+05	0.041865148
8	165.00	0.1091E+05	0.042923823
9	160.00	0.1119E+05	0.044034060
10	155.00	0.1145E+05	0.045034461
11	150.00	0.1168E+05	0.045926802
12	145.00	0.1190E+05	0.046822798
13	140.00	0.1217E+05	0.047871336
14	135.00	0.1238E+05	0.048695669
15	130.00	0.1227E+05	0.048248980
16	125.00	0.1202E+05	0.047295753
17	120.00	0.1167E+05	0.045923240
18	115.00	0.1119E+05	0.044020120
19	110.00	0.1088E+05	0.042809404
20	105.00	0.1062E+05	0.041757256
21	100.00	0.9794E+04	0.038528021

22	95.00	0.8570E+04	.033711206	26475.5
23	90.00	0.7389E+04	.029067229	27194.4
24	85.00	0.5689E+04	.022379598	27975.7
25	80.00	0.3572E+04	.014049856	28829.0
26	75.00	0.1070E+04	.004207398	29765.9
27	70.00	0.8683E+02	.000341548	30801.2
28	65.00	0.5798E+02	.000228072	31953.4
29	60.00	0.2145E+02	.000084385	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.1661E+05		
0.2000E+00		0.1456E+05		
0.3000E+00		0.1344E+05		
0.4000E+00		0.1030E+05		
0.5000E+00		0.1021E+05		
0.6000E+00		0.9086E+04		
0.7000E+00		0.8206E+04		
0.8000E+00		0.6722E+04		
0.9000E+00		0.6718E+04		
0.1000E+01		0.5495E+04		
0.1100E+01		0.6264E+04		
0.1200E+01		0.4605E+04		
0.1300E+01		0.5249E+04		
0.1400E+01		0.4960E+04		
0.1500E+01		0.4290E+04		
0.1600E+01		0.5189E+04		
0.1700E+01		0.4137E+04		
0.1800E+01		0.4920E+04		
0.1900E+01		0.3968E+04		
0.2000E+01		0.3858E+04		
0.2100E+01		0.4718E+04		
0.2200E+01		0.4013E+04		
0.2300E+01		0.3839E+04		
0.2400E+01		0.3884E+04		
0.2500E+01		0.3705E+04		
0.2600E+01		0.4489E+04		
0.2700E+01		0.3809E+04		
0.2800E+01		0.3070E+04		
0.2900E+01		0.3844E+04		
0.3000E+01		0.3352E+04		
0.3100E+01		0.3680E+04		
0.3200E+01		0.3275E+04		
0.3300E+01		0.3261E+04		
0.3400E+01		0.3422E+04		
0.3500E+01		0.3161E+04		
0.3600E+01		0.3033E+04		
0.3700E+01		0.3149E+04		
0.3800E+01		0.2998E+04		
0.3900E+01		0.3171E+04		
0.4000E+01		0.2887E+04		
0.4100E+01		0.2746E+04		
0.4200E+01		0.3325E+04		
0.4300E+01		0.2403E+04		
0.4400E+01		0.2349E+04		
0.4500E+01		0.2542E+04		
0.4600E+01		0.2588E+04		
0.4700E+01		0.2697E+04		
0.4800E+01		0.2579E+04		
0.4900E+01		0.2551E+04		
0.5000E+01		0.2328E+04		
0.5100E+01		0.2456E+04		

0.5200E+01 0.2728E+04
 0.5300E+01 0.2278E+04
 TOTAL OF AZ= 0.2537E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 27
 REACTION 4P5N PRODUCT V48 Q-VALUE= 35.00 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
38.75	0.24	40.79	0.73	42.67	1.58	44.53	2.62	49.00	3.90
52.90	5.20	58.10	5.60	63.00	4.90	79.00	6.63	89.20	12.80
98.90	15.20	108.00	15.30	116.50	15.20	125.10	15.70	133.40	16.20
141.30	16.10	148.90	16.50	154.90	17.00	160.90	16.20	166.20	17.10
166.90	16.30	172.70	16.30	178.40	16.20	183.90	16.30	189.30	16.40
194.50	16.80	199.80	17.00						

THE TOTAL ACTIVATION IS 0.4282E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
1 200.00	0.2322E+04	.054232076
2 195.00	0.2368E+04	.055287588
3 190.00	0.2406E+04	.056180604
4 185.00	0.2436E+04	.056873791
5 180.00	0.2448E+04	.057169888
6 175.00	0.2462E+04	.057495527
7 170.00	0.2457E+04	.057362780
8 165.00	0.2451E+04	.057242688
9 160.00	0.2441E+04	.056995165
10 155.00	0.2414E+04	.056378860
11 150.00	0.2379E+04	.055554066
12 145.00	0.2332E+04	.054459173
13 140.00	0.2259E+04	.052752245
14 135.00	0.2130E+04	.049747825
15 130.00	0.1931E+04	.045096867
16 125.00	0.1685E+04	.039347630
17 120.00	0.1411E+04	.032957107
18 115.00	0.1147E+04	.026776979
19 110.00	0.9372E+03	.021884019
20 105.00	0.7806E+03	.018227616
21 100.00	0.6312E+03	.014739278
22 95.00	0.4721E+03	.011023751
23 90.00	0.3194E+03	.007459222
24 85.00	0.1582E+03	.003694132
25 80.00	0.4377E+02	.001022127
26 75.00	0.1673E+01	.000039067
27 70.00	0.0000E+00	.000000000
28 65.00	0.0000E+00	.000000000
29 60.00	0.0000E+00	.000000000
30 55.00	0.0000E+00	.000000000
31 50.00	0.0000E+00	.000000000
32 45.00	0.0000E+00	.000000000
33 40.00	0.0000E+00	.000000000
34 35.00	0.0000E+00	.000000000
35 30.00	0.0000E+00	.000000000
36 25.00	0.0000E+00	.000000000
37 20.00	0.0000E+00	.000000000
38 15.00	0.0000E+00	.000000000
39 10.00	0.0000E+00	.000000000
40 5.00	0.0000E+00	.000000000

PROTON FLUX
 PROTONS/DAY*CM**2

10794.0
 11143.3
 11513.3
 11906.1
 12323.5
 12768.0
 13242.1
 13748.7
 14291.3
 14873.5
 15499.8
 16175.0
 16904.9
 17696.1
 18556.3
 19494.7
 20521.7
 21650.2
 22895.1
 24274.7
 25811.0
 26475.5
 27194.4
 27975.7
 28829.0
 29765.9
 30801.2
 31953.4
 33246.3
 34711.2
 36390.0
 37815.7
 39475.7
 41445.9
 43843.0
 47588.0
 52609.5
 59873.0
 86539.0
 111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.2822E+04
0.2000E+00	0.2490E+04
0.3000E+00	0.2295E+04
0.4000E+00	0.1745E+04
0.5000E+00	0.1709E+04
0.6000E+00	0.1504E+04
0.7000E+00	0.1337E+04
0.8000E+00	0.1075E+04
0.9000E+00	0.1075E+04
0.1000E+01	0.8737E+03
0.1100E+01	0.1022E+04
0.1200E+01	0.7710E+03
0.1300E+01	0.9020E+03
0.1400E+01	0.8536E+03

0.1500E+01	0.7368E+03
0.1600E+01	0.8868E+03
0.1700E+01	0.7081E+03
0.1800E+01	0.8447E+03
0.1900E+01	0.6794E+03
0.2000E+01	0.6610E+03
0.2100E+01	0.8094E+03
0.2200E+01	0.6885E+03
0.2300E+01	0.6588E+03
0.2400E+01	0.6663E+03
0.2500E+01	0.6323E+03
0.2600E+01	0.7670E+03
0.2700E+01	0.6493E+03
0.2800E+01	0.5204E+03
0.2900E+01	0.6543E+03
0.3000E+01	0.5715E+03
0.3100E+01	0.6290E+03
0.3200E+01	0.5561E+03
0.3300E+01	0.5554E+03
0.3400E+01	0.5773E+03
0.3500E+01	0.5345E+03
0.3600E+01	0.5126E+03
0.3700E+01	0.5335E+03
0.3800E+01	0.5054E+03
0.3900E+01	0.5357E+03
0.4000E+01	0.4860E+03
0.4100E+01	0.4589E+03
0.4200E+01	0.5623E+03
0.4300E+01	0.4018E+03
0.4400E+01	0.4947E+03
0.4500E+01	0.4236E+03
0.4600E+01	0.4334E+03
0.4700E+01	0.4519E+03
0.4800E+01	0.4261E+03
0.4900E+01	0.4267E+03
0.5000E+01	0.3849E+03
0.5100E+01	0.4070E+03
0.5200E+01	0.4535E+03
0.5300E+01	0.3799E+03

TOTAL OF AZ= 0.4274E+05
 PHYLAIRD job terminated at 29-MAY-1991 14:00:45.59

Accounting information:

Buffered I/O count:	101	Peak working set size:	396
Direct I/O count:	191	Peak page file size:	2527
Page faults:	719	Mounted volumes:	0
Charged CPU time:	0 00:00:31.66	Elapsed time:	0 00:02:41.59

ENTER THE NAME OF THE DATA FILE BEING USED
PFED

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THE TARGET IS          FE
TM,C,AND A ARE        55.847  148.000  3.000
NCM= 10  NCM= 2  NMC= 3
THE COVERING MATERIAL IS ALUM
TC,CC, AND AC ARE     27.000  184.000  5.400
THICKNESS OF COVERING MATERIAL  0.00
THE INELASTIC XSECTIONS FOR COVERING
MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
THE INELASTIC XSECTIONS OF THE TARGET
MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
20.001611.00 25.001517.00 30.001649.00 35.001703.00 40.001740.00
50.001748.00 60.001776.00 100.001662.00 225.001500.00 340.001626.00
TARGET THICKNESS 20.271 CM/CM**2  WIDTH 5.080CM  LENGTH 5.080 CM
INITIAL THETA 0.0  FINAL THETA 89.0  INCREMENT 11.0
INITIAL PHI 0.0  FINAL PHI 0.0  INCREMENT 1.0
200.00 5.00 5.00 0.100 8
THE NUMBER OF REACTIONS EQUAL 8
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY  MEV P/SQCM*DAY
1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
30.0 43843.0 50.0 36396.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 37
REACTION  PRODUCT C057  Q-VALUE= 1.60 MEV
MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS  MEV  MBS
13.43 7.64 15.18 5.05 16.79 3.92 18.28 3.41 20.22 2.57
22.05 2.31 23.75 1.87 25.77 1.50 27.04 1.38 27.68 1.17
29.19 1.04 29.66 0.88 31.22 0.83 33.23 0.66 35.14 0.60
38.75 0.50 42.67 0.41 44.50 0.36 49.00 0.34 49.20 0.30
98.90 0.26 108.00 0.25 116.50 0.23 125.10 0.22 133.40 0.21
141.30 0.20 148.90 0.21 154.90 0.19 160.90 0.18 166.20 0.14
166.90 0.18 172.70 0.17 178.40 0.17 183.90 0.16 189.30 0.16
194.50 0.15 199.80 0.14
THE TOTAL ACTIVATION IS 0.2168E+05 NUCLBI /DAY
PARTIAL  FRACTIONAL  PROTON
ENERGY  ACTIVATION  ACTIVATION  FLUX
MEV  NUCLEI PER DAY
1 200.00 0.2683E+03 .012373993 10794.0
2 195.00 0.1967E+03 .009070110 11143.3
3 190.00 0.1458E+03 .006723357 11513.3
4 185.00 0.1553E+03 .007161372 11906.1
5 180.00 0.2575E+03 .011873085 12323.5
6 175.00 0.1938E+03 .008938358 12768.0
7 170.00 0.2018E+03 .009307369 13242.1
8 165.00 0.3441E+03 .015866026 13748.7
9 160.00 0.4933E+03 .022749446 14291.3
10 155.00 0.5236E+03 .024146086 14873.5
11 150.00 0.3964E+03 .018279070 15499.8
12 145.00 0.4485E+03 .020683184 16175.0
13 140.00 0.3949E+03 .018211614 16904.9
14 135.00 0.5182E+03 .023897279 17696.1
15 130.00 0.5197E+03 .023964057 18556.3
16 125.00 0.9503E+03 .043823637 19494.7
17 120.00 0.1248E+04 .057573628 20521.7
18 115.00 0.8212E+03 .037871704 21650.2
19 110.00 0.1235E+04 .056938794 22895.1
20 105.00 0.9706E+03 .044761725 24274.7
21 100.00 0.5810E+03 .026792044 25811.0
22 95.00 0.1351E+04 .062286124 26475.5
23 90.00 0.6821E+03 .031457111 27194.4
24 85.00 0.1832E+04 .084499024 27975.7
25 80.00 0.7134E+03 .032899808 28829.0
26 75.00 0.1295E+04 .059716853 29765.9
27 70.00 0.1122E+04 .051730268 30801.2
28 65.00 0.1222E+04 .056372270 31953.4
29 60.00 0.1413E+04 .065181273 33246.3
30 55.00 0.1189E+04 .054851223 34711.2
31 50.00 0.0000E+00 .000000000 36390.0
32 45.00 0.0000E+00 .000000000 37815.7
33 40.00 0.0000E+00 .000000000 39475.7

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34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.1087E+04		
0.2000E+00		0.9820E+03		
0.3000E+00		0.1137E+04		
0.4000E+00		0.5263E+03		
0.5000E+00		0.6033E+03		
0.6000E+00		0.6138E+03		
0.7000E+00		0.8181E+03		
0.8000E+00		0.3310E+03		
0.9000E+00		0.2974E+03		
0.1000E+01		0.3791E+03		
0.1100E+01		0.4234E+03		
0.1200E+01		0.3759E+03		
0.1300E+01		0.2489E+03		
0.1400E+01		0.2516E+03		
0.1500E+01		0.1803E+03		
0.1600E+01		0.2254E+03		
0.1700E+01		0.3369E+03		
0.1800E+01		0.4013E+03		
0.1900E+01		0.8524E+02		
0.2000E+01		0.1214E+03		
0.2100E+01		0.2706E+03		
0.2200E+01		0.7982E+02		
0.2300E+01		0.2135E+03		
0.2400E+01		0.4643E+03		
0.2500E+01		0.2195E+03		
0.2600E+01		0.1757E+03		
0.2700E+01		0.9898E+02		
0.2800E+01		0.1205E+03		
0.2900E+01		0.1877E+03		
0.3000E+01		0.2203E+03		
0.3100E+01		0.1116E+03		
0.3200E+01		0.1381E+03		
0.3300E+01		0.1169E+03		
0.3400E+01		0.2222E+03		
0.3500E+01		0.1859E+03		
0.3600E+01		0.8553E+02		
0.3700E+01		0.1759E+03		
0.3800E+01		0.7558E+02		
0.3900E+01		0.2075E+03		
0.4000E+01		0.1543E+03		
0.4100E+01		0.3375E+03		
0.4200E+01		0.1442E+03		
0.4300E+01		0.1452E+03		
0.4400E+01		0.4191E+02		
0.4500E+01		0.7239E+02		
0.4600E+01		0.2432E+03		
0.4700E+01		0.8837E+02		
0.4800E+01		0.6596E+02		
0.4900E+01		0.1541E+03		
0.5000E+01		0.1809E+03		
0.5100E+01		0.1158E+03		
0.5200E+01		0.1339E+03		
0.5300E+01		0.4649E+02		
0.5400E+01		0.8105E+02		
0.5500E+01		0.1317E+03		
0.5600E+01		0.8439E+02		
0.5700E+01		0.1658E+03		
0.5800E+01		0.2188E+03		
0.5900E+01		0.1119E+03		
0.6000E+01		0.3021E+02		
0.6100E+01		0.4463E+02		
0.6200E+01		0.5519E+02		
0.6300E+01		0.4174E+02		
0.6400E+01		0.1107E+03		
0.6500E+01		0.2430E+03		

0.6600E+01	0.6179E+02
0.6700E+01	0.1266E+03
0.6800E+01	0.5855E+02
0.6900E+01	0.1743E+02
0.7000E+01	0.2917E+02
0.7100E+01	0.3473E+02
0.7200E+01	0.1653E+03
0.7300E+01	0.3655E+02
0.7400E+01	0.8269E+02
0.7500E+01	0.4611E+02
0.7600E+01	0.1335E+03
0.7700E+01	0.5294E+02
0.7800E+01	0.1168E+03
0.7900E+01	0.1115E+03
0.8000E+01	0.6948E+02
0.8100E+01	0.3644E+02
0.8200E+01	0.1103E+03
0.8300E+01	0.4534E+02
0.8400E+01	0.1608E+03
0.8500E+01	0.6851E+02
0.8600E+01	0.2659E+02
0.8700E+01	0.4906E+02
0.8800E+01	0.4774E+02
0.8900E+01	0.1253E+03
0.9000E+01	0.2303E+03
0.9100E+01	0.1532E+02
0.9200E+01	0.2226E+02
0.9300E+01	0.4024E+02
0.9400E+01	0.1004E+03
0.9500E+01	0.1036E+03
0.9600E+01	0.4887E+02
0.9700E+01	0.1724E+02
0.9800E+01	0.3381E+02
0.9900E+01	0.5802E+02
0.1000E+02	0.7509E+02
0.1010E+02	0.7070E+02
0.1020E+02	0.4365E+02
0.1030E+02	0.3190E+02
0.1040E+02	0.5068E+02
0.1050E+02	0.1583E+03
0.1060E+02	0.1355E+02
0.1070E+02	0.2041E+02
0.1080E+02	0.5337E+02
0.1090E+02	0.4230E+02
0.1100E+02	0.4799E+02
0.1110E+02	0.1055E+03
0.1120E+02	0.2882E+02
0.1130E+02	0.1017E+03
0.1140E+02	0.1764E+02
0.1150E+02	0.7115E+02
0.1160E+02	0.1079E+03
0.1170E+02	0.1579E+02
0.1180E+02	0.3806E+02
0.1190E+02	0.4110E+02
0.1200E+02	0.1402E+02
0.1210E+02	0.1838E+02
0.1220E+02	0.3278E+02
0.1230E+02	0.8551E+02
0.1240E+02	0.2829E+02
0.1250E+02	0.8533E+02
0.1260E+02	0.4824E+02
0.1270E+02	0.7566E+02
0.1280E+02	0.5230E+02
0.1290E+02	0.2057E+02
0.1300E+02	0.8242E+01
0.1310E+02	0.9412E+01
0.1320E+02	0.1047E+02
0.1330E+02	0.1309E+02
0.1340E+02	0.2401E+02
0.1350E+02	0.4951E+02
0.1360E+02	0.6548E+02
0.1370E+02	0.7120E+02
0.1380E+02	0.2596E+02
0.1390E+02	0.1510E+02

0.1400E+02	0.3030E+02
0.1410E+02	0.8433E+01
0.1420E+02	0.8906E+01
0.1430E+02	0.1443E+02
0.1440E+02	0.6534E+02
0.1450E+02	0.8983E+01
0.1460E+02	0.1580E+02
0.1470E+02	0.2723E+02
0.1480E+02	0.5082E+02
0.1490E+02	0.6672E+02
0.1500E+02	0.3233E+02
0.1510E+02	0.1275E+02
0.1520E+02	0.2405E+02
0.1530E+02	0.9492E+01
0.1540E+02	0.1608E+02
0.1550E+02	0.5592E+01
0.1560E+02	0.7312E+01
0.1570E+02	0.1095E+02
0.1580E+02	0.1328E+02
0.1590E+02	0.6478E+02
0.1600E+02	0.1951E+02
0.1610E+02	0.4229E+02
0.1620E+02	0.1833E+02
0.1630E+02	0.5540E+02
0.1640E+02	0.1127E+02
0.1650E+02	0.2467E+02
0.1660E+02	0.5179E+01
0.1670E+02	0.7538E+01
0.1680E+02	0.6552E+01
0.1690E+02	0.9310E+01
0.1700E+02	0.3938E+02
0.1710E+02	0.1141E+02
0.1720E+02	0.2596E+02
0.1730E+02	0.5315E+02
0.1740E+02	0.2613E+02
0.1750E+02	0.9496E+01
0.1760E+02	0.1422E+02
0.1770E+02	0.3162E+02
0.1780E+02	0.2077E+02
0.1790E+02	0.5961E+01
0.1800E+02	0.1117E+02
0.1810E+02	0.1719E+02
0.1820E+02	0.1835E+02
0.1830E+02	0.6198E+01
0.1840E+02	0.8812E+01
0.1850E+02	0.1593E+02
0.1860E+02	0.4931E+02
0.1870E+02	0.1146E+02
0.1880E+02	0.2354E+02
0.1890E+02	0.9243E+01
0.1900E+02	0.1699E+02
0.1910E+02	0.6360E+02
0.1920E+02	0.1515E+02
0.1930E+02	0.3273E+02
0.1940E+02	0.3412E+01
0.1950E+02	0.4251E+01
0.1960E+02	0.5196E+01
0.1970E+02	0.7165E+01
0.1980E+02	0.3653E+02
0.1990E+02	0.4753E+01
0.2000E+02	0.7339E+01
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF A2= 0.2156E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

REACTION		N		PRODUCT		C056		Q-VALUE=		5.40 MEV	
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
5.30	21.70	13.43	342.00	15.18	314.00	16.79	202.00	17.23	127.00		
20.22	69.00	22.05	46.10	23.75	36.20	25.77	29.40	27.04	27.00		
27.68	24.96	29.19	23.00	29.66	21.90	31.22	20.40	33.23	18.30		
35.14	17.00	36.98	16.00	38.75	14.80	40.79	13.80	42.67	13.30		
44.53	12.31	79.00	7.09	39.20	5.99	98.90	4.91	103.00	4.43		
116.50	4.66	125.10	3.74	133.40	3.51	141.30	3.24	142.90	3.10		

154.90 3.13 160.90 2.98 166.20 2.45 166.90 2.87 172.70 2.78
 178.40 2.61 183.90 2.53 189.30 2.49 194.50 2.32 199.80 2.10

THE TOTAL ACTIVATION IS 0.1279E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1754E+04	.013714E+11	10794.0
2 195.00	0.1855E+04	.014505E+11	11143.3
3 190.00	0.1965E+04	.015364E+11	11513.3
4 185.00	0.2097E+04	.016400E+11	11906.1
5 180.00	0.2322E+04	.018153E+11	12323.5
6 175.00	0.2499E+04	.019540E+11	12768.0
7 170.00	0.2659E+04	.020786E+11	13242.1
8 165.00	0.2997E+04	.023433E+11	13748.7
9 160.00	0.3326E+04	.026066E+11	14291.3
10 155.00	0.3862E+04	.030199E+11	14873.5
11 150.00	0.4133E+04	.032282E+11	15493.8
12 145.00	0.4337E+04	.033900E+11	16175.0
13 140.00	0.4477E+04	.035000E+11	16904.9
14 135.00	0.4730E+04	.036983E+11	17696.1
15 130.00	0.4925E+04	.038507E+11	18556.3
16 125.00	0.5078E+04	.039703E+11	19494.7
17 120.00	0.5299E+04	.041433E+11	20521.7
18 115.00	0.5548E+04	.043380E+11	21650.2
19 110.00	0.5742E+04	.044836E+11	22895.1
20 105.00	0.5991E+04	.046844E+11	24274.7
21 100.00	0.6205E+04	.048515E+11	25811.0
22 95.00	0.6181E+04	.048330E+11	26475.5
23 90.00	0.6175E+04	.048286E+11	27194.4
24 85.00	0.6093E+04	.047646E+11	27975.7
25 80.00	0.6041E+04	.047238E+11	28829.0
26 75.00	0.5920E+04	.046288E+11	29765.9
27 70.00	0.5786E+04	.045243E+11	30801.2
28 65.00	0.5429E+04	.042454E+11	31953.4
29 60.00	0.4175E+04	.032646E+11	33246.3
30 55.00	0.2908E+03	.002274E+11	34711.2
31 50.00	0.0000E+00	.000000E+00	36390.0
32 45.00	0.0000E+00	.000000E+00	37815.7
33 40.00	0.0000E+00	.000000E+00	39475.7
34 35.00	0.0000E+00	.000000E+00	41445.9
35 30.00	0.0000E+00	.000000E+00	43843.0
36 25.00	0.0000E+00	.000000E+00	47588.0
37 20.00	0.0000E+00	.000000E+00	52609.5
38 15.00	0.0000E+00	.000000E+00	59873.0
39 10.00	0.0000E+00	.000000E+00	86539.0
40 5.00	0.0000E+00	.000000E+00	111493.4

DEPTH
GRAMS/SQ CM
0.1000E+00
0.2000E+00
0.3000E+00
0.4000E+00
0.5000E+00
0.6000E+00
0.7000E+00
0.8000E+00
0.9000E+00
0.1000E+01
0.1100E+01
0.1200E+01
0.1300E+01
0.1400E+01
0.1500E+01
0.1600E+01
0.1700E+01
0.1800E+01
0.1900E+01
0.2000E+01
0.2100E+01
0.2200E+01
0.2300E+01
0.2400E+01
0.2500E+01
0.2600E+01

ACTIVATION
NUCLEI/DAY
0.6479E+04
0.5317E+04
0.4558E+04
0.3151E+04
0.3321E+04
0.3164E+04
0.2899E+04
0.2341E+04
0.2401E+04
0.1775E+04
0.2338E+04
0.1747E+04
0.1999E+04
0.1389E+04
0.1523E+04
0.1428E+04
0.1360E+04
0.1341E+04
0.1331E+04
0.1337E+04
0.1476E+04
0.1371E+04
0.9441E+03
0.9087E+03
0.1106E+04
0.1598E+04

0.2700E+01	0.1383E+04
0.2800E+01	0.9087E+03
0.2900E+01	0.8522E+03
0.3000E+01	0.1015E+04
0.3100E+01	0.1237E+04
0.3200E+01	0.8796E+03
0.3300E+01	0.9844E+03
0.3400E+01	0.9243E+03
0.3500E+01	0.1003E+04
0.3600E+01	0.1021E+04
0.3700E+01	0.1011E+04
0.3800E+01	0.8079E+03
0.3900E+01	0.1033E+04
0.4000E+01	0.8319E+03
0.4100E+01	0.6211E+03
0.4200E+01	0.8866E+03
0.4300E+01	0.7634E+03
0.4400E+01	0.1002E+04
0.4500E+01	0.8959E+03
0.4600E+01	0.8216E+03
0.4700E+01	0.7667E+03
0.4800E+01	0.5920E+03
0.4900E+01	0.8430E+03
0.5000E+01	0.6338E+03
0.5100E+01	0.6403E+03
0.5200E+01	0.7418E+03
0.5300E+01	0.7449E+03
0.5400E+01	0.1111E+04
0.5500E+01	0.7094E+03
0.5600E+01	0.6744E+03
0.5700E+01	0.4822E+03
0.5800E+01	0.4251E+03
0.5900E+01	0.6279E+03
0.6000E+01	0.6551E+03
0.6100E+01	0.5789E+03
0.6200E+01	0.8295E+03
0.6300E+01	0.8412E+03
0.6400E+01	0.6376E+03
0.6500E+01	0.5246E+03
0.6600E+01	0.4286E+03
0.6700E+01	0.4335E+03
0.6800E+01	0.4712E+03
0.6900E+01	0.5598E+03
0.7000E+01	0.7769E+03
0.7100E+01	0.5765E+03
0.7200E+01	0.5081E+03
0.7300E+01	0.5205E+03
0.7400E+01	0.4590E+03
0.7500E+01	0.5117E+03
0.7600E+01	0.4592E+03
0.7700E+01	0.6449E+03
0.7800E+01	0.4310E+03
0.7900E+01	0.4776E+03
0.8000E+01	0.3923E+03
0.8100E+01	0.3896E+03
0.8200E+01	0.4001E+03
0.8300E+01	0.4773E+03
0.8400E+01	0.5180E+03
0.8500E+01	0.4522E+03
0.8600E+01	0.3417E+03
0.8700E+01	0.3294E+03
0.8800E+01	0.4367E+03
0.8900E+01	0.3751E+03
0.9000E+01	0.4559E+03
0.9100E+01	0.3709E+03
0.9200E+01	0.3742E+03
0.9300E+01	0.3096E+03
0.9400E+01	0.3796E+03
0.9500E+01	0.4687E+03
0.9600E+01	0.4153E+03
0.9700E+01	0.3276E+03
0.9800E+01	0.2720E+03
0.9900E+01	0.3698E+03
0.1000E+02	0.4016E+03

0.1010E+02	0.4285E+03
0.1020E+02	0.3174E+03
0.1030E+02	0.2538E+03
0.1040E+02	0.2522E+03
0.1050E+02	0.2839E+03
0.1060E+02	0.3666E+03
0.1070E+02	0.5338E+03
0.1080E+02	0.3890E+03
0.1090E+02	0.2450E+03
0.1100E+02	0.2619E+03
0.1110E+02	0.2843E+03
0.1120E+02	0.3103E+03
0.1130E+02	0.3125E+03
0.1140E+02	0.3128E+03
0.1150E+02	0.3307E+03
0.1160E+02	0.3236E+03
0.1170E+02	0.2094E+03
0.1180E+02	0.2683E+03
0.1190E+02	0.2498E+03
0.1200E+02	0.3354E+03
0.1210E+02	0.3057E+03
0.1220E+02	0.2685E+03
0.1230E+02	0.3007E+03
0.1240E+02	0.3906E+03
0.1250E+02	0.2744E+03
0.1260E+02	0.2147E+03
0.1270E+02	0.1900E+03
0.1280E+02	0.2122E+03
0.1290E+02	0.1825E+03
0.1300E+02	0.2289E+03
0.1310E+02	0.2724E+03
0.1320E+02	0.2885E+03
0.1330E+02	0.3061E+03
0.1340E+02	0.4068E+03
0.1350E+02	0.3241E+03
0.1360E+02	0.2758E+03
0.1370E+02	0.1303E+03
0.1380E+02	0.1225E+03
0.1390E+02	0.1333E+03
0.1400E+02	0.1402E+03
0.1410E+02	0.2092E+03
0.1420E+02	0.2939E+03
0.1430E+02	0.2435E+03
0.1440E+02	0.2904E+03
0.1450E+02	0.2787E+03
0.1460E+02	0.3259E+03
0.1470E+02	0.2130E+03
0.1480E+02	0.1693E+03
0.1490E+02	0.1369E+03
0.1500E+02	0.1310E+03
0.1510E+02	0.1796E+03
0.1520E+02	0.1427E+03
0.1530E+02	0.1181E+03
0.1540E+02	0.1486E+03
0.1550E+02	0.1646E+03
0.1560E+02	0.2653E+03
0.1570E+02	0.2834E+03
0.1580E+02	0.2149E+03
0.1590E+02	0.2231E+03
0.1600E+02	0.1889E+03
0.1610E+02	0.2258E+03
0.1620E+02	0.1500E+03
0.1630E+02	0.9484E+02
0.1640E+02	0.8386E+02
0.1650E+02	0.1165E+03
0.1660E+02	0.1335E+03
0.1670E+02	0.2217E+03
0.1680E+02	0.1543E+03
0.1690E+02	0.2099E+03
0.1700E+02	0.2572E+03
0.1710E+02	0.1820E+03
0.1720E+02	0.1798E+03
0.1730E+02	0.1723E+03
0.1740E+02	0.1489E+03

0.1750E+02	0.1241E+03
0.1760E+02	0.9003E+02
0.1770E+02	0.1475E+03
0.1780E+02	0.1257E+03
0.1790E+02	0.1552E+03
0.1800E+02	0.1410E+03
0.1810E+02	0.1396E+03
0.1820E+02	0.1886E+03
0.1830E+02	0.1307E+03
0.1840E+02	0.1390E+03
0.1850E+02	0.1421E+03
0.1860E+02	0.1499E+03
0.1870E+02	0.1719E+03
0.1880E+02	0.1692E+03
0.1890E+02	0.1453E+03
0.1900E+02	0.1884E+03
0.1910E+02	0.9072E+02
0.1920E+02	0.7309E+02
0.1930E+02	0.1145E+03
0.1940E+02	0.1028E+03
0.1950E+02	0.1080E+03
0.1960E+02	0.9493E+02
0.1970E+02	0.1053E+03
0.1980E+02	0.1495E+03
0.1990E+02	0.1399E+03
0.2000E+02	0.2204E+03
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF A2= 0.1274E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 20

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	15.50 MEV
13.43	0.02	15.18	0.03	16.79	4.67	18.28	31.00	20.22	46.00		
22.05	55.50	23.75	61.60	25.77	64.30	27.04	60.70	27.68	57.00		
29.19	48.90	29.66	44.50	31.22	35.70	33.23	26.10	35.14	20.50		
36.98	16.70	38.75	14.00	40.79	12.30	42.67	11.00	44.53	10.30		

THE TOTAL ACTIVATION IS 0.5440E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS DAY*CM*12
1	200.00	0.5052E+03	.009288274
2	195.00	0.3572E+03	.010243675
3	190.00	0.6174E+03	.011350393
4	185.00	0.7012E+03	.012890514
5	180.00	0.8378E+03	.015401407
6	175.00	0.9330E+03	.017152237
7	170.00	0.1103E+04	.020270497
8	165.00	0.1261E+04	.023174327
9	160.00	0.1494E+04	.027464759
10	155.00	0.1727E+04	.031740837
11	150.00	0.1830E+04	.033646643
12	145.00	0.1945E+04	.035756789
13	140.00	0.2056E+04	.037805270
14	135.00	0.2187E+04	.040204082
15	130.00	0.2312E+04	.042497177
16	125.00	0.2439E+04	.044844460
17	120.00	0.2571E+04	.047266033
18	115.00	0.2722E+04	.050044425
19	110.00	0.2842E+04	.052253075
20	105.00	0.2987E+04	.054915048
21	100.00	0.3092E+04	.056835832
22	95.00	0.3079E+04	.056603462
23	90.00	0.3030E+04	.055696227
24	85.00	0.2939E+04	.054032836
25	80.00	0.2805E+04	.051561732
26	75.00	0.2612E+04	.048019968
27	70.00	0.2185E+04	.040168334
28	65.00	0.1019E+04	.018741734
29	60.00	0.7066E+01	.000129897
30	55.00	0.0000E+00	.000000000
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000

34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.2424E+04		
0.2000E+00		0.2027E+04		
0.3000E+00		0.1874E+04		
0.4000E+00		0.1423E+04		
0.5000E+00		0.1415E+04		
0.6000E+00		0.1255E+04		
0.7000E+00		0.1162E+04		
0.8000E+00		0.9880E+03		
0.9000E+00		0.1006E+04		
0.1000E+01		0.8583E+03		
0.1100E+01		0.9553E+03		
0.1200E+01		0.7069E+03		
0.1300E+01		0.7274E+03		
0.1400E+01		0.6739E+03		
0.1500E+01		0.5586E+03		
0.1600E+01		0.7056E+03		
0.1700E+01		0.5414E+03		
0.1800E+01		0.6558E+03		
0.1900E+01		0.5012E+03		
0.2000E+01		0.4976E+03		
0.2100E+01		0.6319E+03		
0.2200E+01		0.4985E+03		
0.2300E+01		0.5211E+03		
0.2400E+01		0.5290E+03		
0.2500E+01		0.4599E+03		
0.2600E+01		0.5592E+03		
0.2700E+01		0.4740E+03		
0.2800E+01		0.4049E+03		
0.2900E+01		0.5252E+03		
0.3000E+01		0.4136E+03		
0.3100E+01		0.4556E+03		
0.3200E+01		0.4413E+03		
0.3300E+01		0.4180E+03		
0.3400E+01		0.4412E+03		
0.3500E+01		0.4002E+03		
0.3600E+01		0.3773E+03		
0.3700E+01		0.3972E+03		
0.3800E+01		0.4060E+03		
0.3900E+01		0.3954E+03		
0.4000E+01		0.3657E+03		
0.4100E+01		0.3815E+03		
0.4200E+01		0.4372E+03		
0.4300E+01		0.2973E+03		
0.4400E+01		0.3654E+03		
0.4500E+01		0.3213E+03		
0.4600E+01		0.3330E+03		
0.4700E+01		0.3680E+03		
0.4800E+01		0.3570E+03		
0.4900E+01		0.3096E+03		
0.5000E+01		0.3014E+03		
0.5100E+01		0.3432E+03		
0.5200E+01		0.3606E+03		
0.5300E+01		0.2783E+03		
0.5400E+01		0.3332E+03		
0.5500E+01		0.2646E+03		
0.5600E+01		0.2645E+03		
0.5700E+01		0.3426E+03		
0.5800E+01		0.3259E+03		
0.5900E+01		0.2832E+03		
0.6000E+01		0.2413E+03		
0.6100E+01		0.2456E+03		
0.6200E+01		0.2704E+03		
0.6300E+01		0.2370E+03		
0.6400E+01		0.2825E+03		
0.6500E+01		0.2761E+03		

0.6600E+01	0.2757E+03
0.6700E+01	0.2432E+03
0.6800E+01	0.2799E+03
0.6900E+01	0.2188E+03
0.7000E+01	0.2405E+03
0.7100E+01	0.2144E+03
0.7200E+01	0.2479E+03
0.7300E+01	0.2479E+03
0.7400E+01	0.2234E+03
0.7500E+01	0.2266E+03
0.7600E+01	0.1882E+03
0.7700E+01	0.2483E+03
0.7800E+01	0.1998E+03
0.7900E+01	0.2000E+03
0.8000E+01	0.2088E+03
0.8100E+01	0.1924E+03
0.8200E+01	0.1508E+03
0.8300E+01	0.1888E+03
0.8400E+01	0.1211E+03
0.8500E+01	0.1855E+03
0.8600E+01	0.1881E+03
0.8700E+01	0.1733E+03
0.8800E+01	0.1906E+03
0.8900E+01	0.1790E+03
0.9000E+01	0.1914E+03
0.9100E+01	0.1584E+03
0.9200E+01	0.1712E+03
0.9300E+01	0.1796E+03
0.9400E+01	0.1614E+03
0.9500E+01	0.1509E+03
0.9600E+01	0.1556E+03
0.9700E+01	0.1530E+03
0.9800E+01	0.1581E+03
0.9900E+01	0.1709E+03
0.1000E+02	0.1517E+03
0.1010E+02	0.1384E+03
0.1020E+02	0.1466E+03
0.1030E+02	0.1749E+03
0.1040E+02	0.1702E+03
0.1050E+02	0.1599E+03
0.1060E+02	0.1604E+03
0.1070E+02	0.1355E+03
0.1080E+02	0.1300E+03
0.1090E+02	0.1287E+03
0.1100E+02	0.1429E+03
0.1110E+02	0.1314E+03
0.1120E+02	0.1453E+03
0.1130E+02	0.1420E+03
0.1140E+02	0.1161E+03
0.1150E+02	0.1540E+03
0.1160E+02	0.1342E+03
0.1170E+02	0.1114E+03
0.1180E+02	0.1468E+03
0.1190E+02	0.1233E+03
0.1200E+02	0.1402E+03
0.1210E+02	0.1147E+03
0.1220E+02	0.1075E+03
0.1230E+02	0.1107E+03
0.1240E+02	0.1105E+03
0.1250E+02	0.1252E+03
0.1260E+02	0.1248E+03
0.1270E+02	0.1183E+03
0.1280E+02	0.1367E+03
0.1290E+02	0.1213E+03
0.1300E+02	0.1311E+03
0.1310E+02	0.1229E+03
0.1320E+02	0.1260E+03
0.1330E+02	0.1260E+03
0.1340E+02	0.1179E+03
0.1350E+02	0.1189E+03
0.1360E+02	0.1189E+03
0.1370E+02	0.1230E+03
0.1380E+02	0.1179E+03
0.1390E+02	0.1110E+03

0.1400E+02	0.1185E+03
0.1410E+02	0.1423E+03
0.1420E+02	0.8436E+02
0.1430E+02	0.7986E+02
0.1440E+02	0.7788E+02
0.1450E+02	0.6112E+02
0.1460E+02	0.8133E+02
0.1470E+02	0.8626E+02
0.1480E+02	0.8310E+02
0.1490E+02	0.9066E+02
0.1500E+02	0.8829E+02
0.1510E+02	0.1025E+03
0.1520E+02	0.1015E+03
0.1530E+02	0.9998E+02
0.1540E+02	0.9503E+02
0.1550E+02	0.7859E+02
0.1560E+02	0.7116E+02
0.1570E+02	0.7646E+02
0.1580E+02	0.6737E+02
0.1590E+02	0.7271E+02
0.1600E+02	0.5773E+02
0.1610E+02	0.8322E+02
0.1620E+02	0.1006E+03
0.1630E+02	0.7974E+02
0.1640E+02	0.7683E+02
0.1650E+02	0.9456E+02
0.1660E+02	0.9777E+02
0.1670E+02	0.9466E+02
0.1680E+02	0.6038E+02
0.1690E+02	0.6172E+02
0.1700E+02	0.6530E+02
0.1710E+02	0.5556E+02
0.1720E+02	0.7216E+02
0.1730E+02	0.6041E+02
0.1740E+02	0.6684E+02
0.1750E+02	0.8279E+02
0.1760E+02	0.8710E+02
0.1770E+02	0.9079E+02
0.1780E+02	0.7072E+02
0.1790E+02	0.7867E+02
0.1800E+02	0.6622E+02
0.1810E+02	0.5999E+02
0.1820E+02	0.7288E+02
0.1830E+02	0.5970E+02
0.1840E+02	0.5576E+02
0.1850E+02	0.6887E+02
0.1860E+02	0.5670E+02
0.1870E+02	0.5727E+02
0.1880E+02	0.7014E+02
0.1890E+02	0.5201E+02
0.1900E+02	0.5715E+02
0.1910E+02	0.6540E+02
0.1920E+02	0.5945E+02
0.1930E+02	0.7396E+02
0.1940E+02	0.6214E+02
0.1950E+02	0.6811E+02
0.1960E+02	0.6294E+02
0.1970E+02	0.5790E+02
0.1980E+02	0.7049E+02
0.1990E+02	0.4365E+02
0.2000E+02	0.4019E+02
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.5424E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 39

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
16.79	0.54	20.23	0.57	20.22	0.36	22.05	0.26	22.05	0.45
25.77	1.73	27.04	4.83	27.28	9.20	29.19	22.00	29.19	31.20
31.22	55.76	32.23	32.70	35.14	123.00	36.98	145.00	36.98	157.00
40.79	167.00	42.67	163.00	44.53	157.00	58.10	87.30	58.10	77.30
79.00	74.80	89.20	66.60	98.39	61.10	108.00	57.40	108.00	55.00
125.10	53.00	133.40	51.80	141.30	49.00	148.90	48.00	148.90	46.00

183.90 45.70 166.20 44.30 166.90 44.60 172.70 44.10 178.40 42.50
 182.90 41.80 189.30 41.90 194.50 41.00 199.80 40.40

THE TOTAL ACTIVATION IS 0.4352E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.9752E+04	.022405997	10794.0
2 195.00	0.1769E+05	.0404335854	11143.3
3 190.00	0.1850E+05	.042437408	11513.3
4 185.00	0.1194E+05	.027422393	11906.1
5 180.00	0.1998E+05	.0455610876	12323.5
6 175.00	0.3541E+04	.0083135251	12768.0
7 170.00	0.2160E+05	.049624398	13242.1
8 165.00	0.6936E+04	.0153335294	13748.7
9 160.00	0.2175E+05	.0493335507	14291.3
10 155.00	0.2190E+05	.0503311062	14873.5
11 150.00	0.2191E+05	.0503343338	15499.8
12 145.00	0.2189E+05	.0503338845	16175.0
13 140.00	0.2183E+05	.0503355919	16904.9
14 135.00	0.2171E+05	.049332816	17696.1
15 130.00	0.2153E+05	.049454405	18556.3
16 125.00	0.2127E+05	.048831451	19494.7
17 120.00	0.2090E+05	.048018835	20521.7
18 115.00	0.2038E+05	.046336612	21650.2
19 110.00	0.1971E+05	.045216113	22895.1
20 105.00	0.1880E+05	.043235462	24274.7
21 100.00	0.1778E+05	.040848751	25811.0
22 95.00	0.1597E+05	.036822895	26475.5
23 90.00	0.1404E+05	.0322261206	27194.4
24 85.00	0.1154E+05	.026336057	27975.7
25 80.00	0.8083E+04	.018331753	28829.0
26 75.00	0.3749E+04	.008333789	29765.9
27 70.00	0.5659E+03	.001360149	30801.2
28 65.00	0.1517E+02	.000634857	31953.4
29 60.00	0.6392E+01	.000014687	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.1882E+05		
0.2000E+00	0.1620E+05		
0.3000E+00	0.1480E+05		
0.4000E+00	0.1116E+05		
0.5000E+00	0.1104E+05		
0.6000E+00	0.9836E+04		
0.7000E+00	0.8700E+04		
0.8000E+00	0.7041E+04		
0.9000E+00	0.7317E+04		
0.1000E+01	0.6213E+04		
0.1100E+01	0.7171E+04		
0.1200E+01	0.5077E+04		
0.1300E+01	0.5956E+04		
0.1400E+01	0.5578E+04		
0.1500E+01	0.4802E+04		
0.1600E+01	0.5784E+04		
0.1700E+01	0.4614E+04		
0.1800E+01	0.5471E+04		
0.1900E+01	0.4415E+04		
0.2000E+01	0.4273E+04		
0.2100E+01	0.5254E+04		
0.2200E+01	0.4449E+04		
0.2300E+01	0.4246E+04		
0.2400E+01	0.4318E+04		
0.2500E+01	0.4074E+04		
0.2600E+01	0.4971E+04		

ORIGINAL PAGE IS
OF POOR QUALITY

0.2700E+01	0.4162E+04
0.2800E+01	0.3362E+04
0.2900E+01	0.4237E+04
0.3000E+01	0.3688E+04
0.3100E+01	0.4033E+04
0.3200E+01	0.3590E+04
0.3300E+01	0.3572E+04
0.3400E+01	0.3715E+04
0.3500E+01	0.3429E+04
0.3600E+01	0.3305E+04
0.3700E+01	0.3422E+04
0.3800E+01	0.3247E+04
0.3900E+01	0.3481E+04
0.4000E+01	0.3115E+04
0.4100E+01	0.2952E+04
0.4200E+01	0.3626E+04
0.4300E+01	0.2587E+04
0.4400E+01	0.3152E+04
0.4500E+01	0.2703E+04
0.4600E+01	0.2749E+04
0.4700E+01	0.2868E+04
0.4800E+01	0.2705E+04
0.4900E+01	0.2745E+04
0.5000E+01	0.2501E+04
0.5100E+01	0.2661E+04
0.5200E+01	0.2974E+04
0.5300E+01	0.2470E+04
0.5400E+01	0.2851E+04
0.5500E+01	0.2151E+04
0.5600E+01	0.2204E+04
0.5700E+01	0.2594E+04
0.5800E+01	0.2449E+04
0.5900E+01	0.2365E+04
0.6000E+01	0.2105E+04
0.6100E+01	0.2066E+04
0.6200E+01	0.2334E+04
0.6300E+01	0.2076E+04
0.6400E+01	0.2330E+04
0.6500E+01	0.2149E+04
0.6600E+01	0.2045E+04
0.6700E+01	0.1945E+04
0.6800E+01	0.2210E+04
0.6900E+01	0.1819E+04
0.7000E+01	0.2093E+04
0.7100E+01	0.1590E+04
0.7200E+01	0.1968E+04
0.7300E+01	0.1866E+04
0.7400E+01	0.1632E+04
0.7500E+01	0.1739E+04
0.7600E+01	0.1595E+04
0.7700E+01	0.2062E+04
0.7800E+01	0.1613E+04
0.7900E+01	0.1577E+04
0.8000E+01	0.1673E+04
0.8100E+01	0.1540E+04
0.8200E+01	0.1333E+04
0.8300E+01	0.1657E+04
0.8400E+01	0.1600E+04
0.8500E+01	0.1551E+04
0.8600E+01	0.1291E+04
0.8700E+01	0.1355E+04
0.8800E+01	0.1553E+04
0.8900E+01	0.1527E+04
0.9000E+01	0.1631E+04
0.9100E+01	0.1318E+04
0.9200E+01	0.1353E+04
0.9300E+01	0.1437E+04
0.9400E+01	0.1384E+04
0.9500E+01	0.1391E+04
0.9600E+01	0.1257E+04
0.9700E+01	0.1201E+04
0.9800E+01	0.1227E+04
0.9900E+01	0.1375E+04
0.1000E+02	0.1297E+04

0.1010E+02
0.1020E+02
0.1030E+02
0.1040E+02
0.1050E+02
0.1060E+02
0.1070E+02
0.1080E+02
0.1090E+02
0.1100E+02
0.1110E+02
0.1120E+02
0.1130E+02
0.1140E+02
0.1150E+02
0.1160E+02
0.1170E+02
0.1180E+02
0.1190E+02
0.1200E+02
0.1210E+02
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0.1580E+02
0.1590E+02
0.1600E+02
0.1610E+02
0.1620E+02
0.1630E+02
0.1640E+02
0.1650E+02
0.1660E+02
0.1670E+02
0.1680E+02
0.1690E+02
0.1700E+02
0.1710E+02
0.1720E+02
0.1730E+02
0.1740E+02

0.1184E+04
0.1239E+04
0.1304E+04
0.1280E+04
0.1157E+04
0.1150E+04
0.1319E+04
0.1181E+04
0.1038E+04
0.1118E+04
0.1120E+04
0.1017E+04
0.1102E+04
0.9335E+03
0.1263E+04
0.1082E+04
0.8777E+03
0.1053E+04
0.9107E+03
0.1060E+04
0.9452E+03
0.8788E+03
0.8839E+03
0.9552E+03
0.9309E+03
0.9356E+03
0.8501E+03
0.9736E+03
0.8606E+03
0.9232E+03
0.8801E+03
0.7760E+03
0.7118E+03
0.8339E+03
0.7285E+03
0.8974E+03
0.6598E+03
0.6917E+03
0.7628E+03
0.6878E+03
0.9523E+03
0.6842E+03
0.6816E+03
0.7458E+03
0.6247E+03
0.7565E+03
0.7097E+03
0.6407E+03
0.6393E+03
0.6241E+03
0.7079E+03
0.6661E+03
0.6810E+03
0.6553E+03
0.5903E+03
0.6396E+03
0.6394E+03
0.5744E+03
0.6313E+03
0.5312E+03
0.6769E+03
0.6865E+03
0.5459E+03
0.5108E+03
0.6011E+03
0.6374E+03
0.6624E+03
0.4947E+03
0.5218E+03
0.5605E+03
0.4983E+03
0.5590E+03
0.4737E+03
0.4628E+03

0.1750E+02	0.5022E+03
0.1760E+02	0.4312E+03
0.1770E+02	0.5561E+03
0.1780E+02	0.4543E+03
0.1790E+02	0.5399E+03
0.1800E+02	0.4797E+03
0.1810E+02	0.4527E+03
0.1820E+02	0.5583E+03
0.1830E+02	0.4437E+03
0.1840E+02	0.4232E+03
0.1850E+02	0.4895E+03
0.1860E+02	0.4323E+03
0.1870E+02	0.4289E+03
0.1880E+02	0.5239E+03
0.1890E+02	0.4164E+03
0.1900E+02	0.4608E+03
0.1910E+02	0.4643E+03
0.1920E+02	0.3902E+03
0.1930E+02	0.4846E+03
0.1940E+02	0.3696E+03
0.1950E+02	0.4065E+03
0.1960E+02	0.3598E+03
0.1970E+02	0.3561E+03
0.1980E+02	0.4434E+03
0.1990E+02	0.3454E+03
0.2000E+02	0.3837E+03
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.4340E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 7

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE= 24.10 MEV
33.23	0.40	35.14	0.61	36.98	0.90	38.75	1.04	40.79	1.25	
42.67	1.34	44.53	1.37							

THE TOTAL ACTIVATION IS 0.1623E+05 NUCLEI /DAY

	PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAT*CM*12
1	200.00	0.1333E+04	.082140557	10794.0
2	195.00	0.1267E+04	.078029431	11143.3
3	190.00	0.1202E+04	.074083157	11513.3
4	185.00	0.1140E+04	.070263155	11906.1
5	180.00	0.1079E+04	.066430971	12323.5
6	175.00	0.1020E+04	.062852129	12768.0
7	170.00	0.9617E+03	.0593249081	13242.1
8	165.00	0.9039E+03	.055689819	13748.7
9	160.00	0.8448E+03	.0522047610	14291.3
10	155.00	0.7847E+03	.0483345700	14873.5
11	150.00	0.7267E+03	.044772107	15499.8
12	145.00	0.6708E+03	.041326478	16175.0
13	140.00	0.6169E+03	.038003836	16904.9
14	135.00	0.5646E+03	.034783889	17696.1
15	130.00	0.5140E+03	.031668972	18556.3
16	125.00	0.4650E+03	.028647959	19494.7
17	120.00	0.4173E+03	.025710383	20521.7
18	115.00	0.3708E+03	.022843113	21650.2
19	110.00	0.3254E+03	.020046422	22895.1
20	105.00	0.2808E+03	.017301206	24274.7
21	100.00	0.2371E+03	.014609702	25811.0
22	95.00	0.1865E+03	.011490701	26475.5
23	90.00	0.1397E+03	.008607343	27194.4
24	85.00	0.9630E+02	.0060332987	27975.7
25	80.00	0.5655E+02	.003484219	28823.0
26	75.00	0.2149E+02	.001224236	29765.9
27	70.00	0.3914E+01	.000241164	30801.2
28	65.00	0.2209E+00	.000013607	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0

36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.7550E+03		
0.2000E+00		0.6522E+03		
0.3000E+00		0.5933E+03		
0.4000E+00		0.4431E+03		
0.5000E+00		0.4343E+03		
0.6000E+00		0.3839E+03		
0.7000E+00		0.3425E+03		
0.8000E+00		0.2786E+03		
0.9000E+00		0.2836E+03		
0.1000E+01		0.2347E+03		
0.1100E+01		0.2721E+03		
0.1200E+01		0.2030E+03		
0.1300E+01		0.2368E+03		
0.1400E+01		0.2223E+03		
0.1500E+01		0.1919E+03		
0.1600E+01		0.2300E+03		
0.1700E+01		0.1834E+03		
0.1800E+01		0.2181E+03		
0.1900E+01		0.1752E+03		
0.2000E+01		0.1698E+03		
0.2100E+01		0.2078E+03		
0.2200E+01		0.1763E+03		
0.2300E+01		0.1681E+03		
0.2400E+01		0.1700E+03		
0.2500E+01		0.1607E+03		
0.2600E+01		0.1963E+03		
0.2700E+01		0.1641E+03		
0.2800E+01		0.1318E+03		
0.2900E+01		0.1655E+03		
0.3000E+01		0.1438E+03		
0.3100E+01		0.1589E+03		
0.3200E+01		0.1402E+03		
0.3300E+01		0.1394E+03		
0.3400E+01		0.1449E+03		
0.3500E+01		0.1338E+03		
0.3600E+01		0.1280E+03		
0.3700E+01		0.1337E+03		
0.3800E+01		0.1260E+03		
0.3900E+01		0.1341E+03		
0.4000E+01		0.1209E+03		
0.4100E+01		0.1141E+03		
0.4200E+01		0.1401E+03		
0.4300E+01		0.9967E+02		
0.4400E+01		0.1228E+03		
0.4500E+01		0.1051E+03		
0.4600E+01		0.1073E+03		
0.4700E+01		0.1125E+03		
0.4800E+01		0.1051E+03		
0.4900E+01		0.1055E+03		
0.5000E+01		0.9507E+02		
0.5100E+01		0.1010E+03		
0.5200E+01		0.1124E+03		
0.5300E+01		0.9353E+02		
0.5400E+01		0.1092E+03		
0.5500E+01		0.8228E+02		
0.5600E+01		0.8358E+02		
0.5700E+01		0.9697E+02		
0.5800E+01		0.9065E+02		
0.5900E+01		0.8595E+02		
0.6000E+01		0.7746E+02		
0.6100E+01		0.7689E+02		
0.6200E+01		0.8764E+02		
0.6300E+01		0.7719E+02		
0.6400E+01		0.8635E+02		
0.6500E+01		0.7912E+02		
0.6600E+01		0.7378E+02		
0.6700E+01		0.7028E+02		

0.6800E+01	0.7394E+02
0.6900E+01	0.6602E+02
0.7000E+01	0.7598E+02
0.7100E+01	0.5815E+02
0.7200E+01	0.7336E+02
0.7300E+01	0.7023E+02
0.7400E+01	0.6076E+02
0.7500E+01	0.6432E+02
0.7600E+01	0.5862E+02
0.7700E+01	0.7582E+02
0.7800E+01	0.5966E+02
0.7900E+01	0.5837E+02
0.8000E+01	0.6160E+02
0.8100E+01	0.5648E+02
0.8200E+01	0.4884E+02
0.8300E+01	0.6102E+02
0.8400E+01	0.5919E+02
0.8500E+01	0.5707E+02
0.8600E+01	0.4804E+02
0.8700E+01	0.4963E+02
0.8800E+01	0.5642E+02
0.8900E+01	0.5493E+02
0.9000E+01	0.5824E+02
0.9100E+01	0.4654E+02
0.9200E+01	0.4740E+02
0.9300E+01	0.5050E+02
0.9400E+01	0.4879E+02
0.9500E+01	0.4895E+02
0.9600E+01	0.4441E+02
0.9700E+01	0.4250E+02
0.9800E+01	0.4357E+02
0.9900E+01	0.4845E+02
0.1000E+02	0.4534E+02
0.1010E+02	0.4099E+02
0.1020E+02	0.4296E+02
0.1030E+02	0.4426E+02
0.1040E+02	0.4377E+02
0.1050E+02	0.3841E+02
0.1060E+02	0.3855E+02
0.1070E+02	0.4384E+02
0.1080E+02	0.3994E+02
0.1090E+02	0.3520E+02
0.1100E+02	0.3810E+02
0.1110E+02	0.3820E+02
0.1120E+02	0.3432E+02
0.1130E+02	0.3699E+02
0.1140E+02	0.3091E+02
0.1150E+02	0.4263E+02
0.1160E+02	0.3563E+02
0.1170E+02	0.2891E+02
0.1180E+02	0.3458E+02
0.1190E+02	0.3015E+02
0.1200E+02	0.3461E+02
0.1210E+02	0.3062E+02
0.1220E+02	0.2873E+02
0.1230E+02	0.2859E+02
0.1240E+02	0.3103E+02
0.1250E+02	0.3019E+02
0.1260E+02	0.3008E+02
0.1270E+02	0.2679E+02
0.1280E+02	0.3099E+02
0.1290E+02	0.2726E+02
0.1300E+02	0.2925E+02
0.1310E+02	0.2781E+02
0.1320E+02	0.2445E+02
0.1330E+02	0.2269E+02
0.1340E+02	0.2647E+02
0.1350E+02	0.2332E+02
0.1360E+02	0.2917E+02
0.1370E+02	0.2134E+02
0.1380E+02	0.2230E+02
0.1390E+02	0.2443E+02
0.1400E+02	0.2162E+02
0.1410E+02	0.3000E+02

0.1420E+02	0.2087E+02
0.1430E+02	0.2053E+02
0.1440E+02	0.2243E+02
0.1450E+02	0.1893E+02
0.1460E+02	0.2274E+02
0.1470E+02	0.2143E+02
0.1480E+02	0.1906E+02
0.1490E+02	0.1997E+02
0.1500E+02	0.1856E+02
0.1510E+02	0.2119E+02
0.1520E+02	0.1986E+02
0.1530E+02	0.2044E+02
0.1540E+02	0.1920E+02
0.1550E+02	0.1708E+02
0.1560E+02	0.1881E+02
0.1570E+02	0.1824E+02
0.1580E+02	0.1626E+02
0.1590E+02	0.1764E+02
0.1600E+02	0.1520E+02
0.1610E+02	0.1910E+02
0.1620E+02	0.1929E+02
0.1630E+02	0.1501E+02
0.1640E+02	0.1433E+02
0.1650E+02	0.1606E+02
0.1660E+02	0.1732E+02
0.1670E+02	0.1772E+02
0.1680E+02	0.1340E+02
0.1690E+02	0.1360E+02
0.1700E+02	0.1465E+02
0.1710E+02	0.1312E+02
0.1720E+02	0.1588E+02
0.1730E+02	0.1268E+02
0.1740E+02	0.1250E+02
0.1750E+02	0.1348E+02
0.1760E+02	0.1189E+02
0.1770E+02	0.1497E+02
0.1780E+02	0.1173E+02
0.1790E+02	0.1399E+02
0.1800E+02	0.1214E+02
0.1810E+02	0.1110E+02
0.1820E+02	0.1357E+02
0.1830E+02	0.1068E+02
0.1840E+02	0.1038E+02
0.1850E+02	0.1125E+02
0.1860E+02	0.1017E+02
0.1870E+02	0.1001E+02
0.1880E+02	0.1216E+02
0.1890E+02	0.9670E+01
0.1900E+02	0.1026E+02
0.1910E+02	0.1130E+02
0.1920E+02	0.9143E+01
0.1930E+02	0.1111E+02
0.1940E+02	0.8802E+01
0.1950E+02	0.9328E+01
0.1960E+02	0.8504E+01
0.1970E+02	0.8366E+01
0.1980E+02	0.1014E+02
0.1990E+02	0.8072E+01
0.2000E+02	0.8519E+01
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.1620E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 40

MEV	REACTION	He3	PRODUCT	MN52	Q-VALUE=	13.20 MEV		
MEV	MBS	MEV	MBS	MEV	MBS	MBS		
18.28	26.11	20.22	0.20	22.05	3.47	23.75	11.80	21.30
27.04	23.50	27.68	27.10	29.19	28.90	29.66	32.00	32.50
33.23	32.20	35.14	39.20	36.98	25.70	38.75	22.10	18.70
42.87	38.40	44.50	14.60	49.00	11.90	52.90	11.00	9.90
63.00	20.30	79.00	33.40	89.20	27.90	98.90	24.20	22.40
116.50	20.30	125.10	20.10	133.40	19.20	141.30	18.30	17.70
154.90	17.30	160.90	16.80	166.20	16.40	166.90	16.40	16.00
178.40	15.30	183.90	15.30	189.30	15.00	194.50	14.70	14.40

THE TOTAL ACTIVATION IS 0.1409E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.5780E+04	.041011252	10794.0
2 195.00	0.5987E+04	.042479049	11143.3
3 190.00	0.6197E+04	.043964352	11513.3
4 185.00	0.6435E+04	.045653485	11906.1
5 180.00	0.6651E+04	.047189591	12323.5
6 175.00	0.6814E+04	.048347734	12768.0
7 170.00	0.6939E+04	.049230091	13242.1
8 165.00	0.7008E+04	.049723908	13748.7
9 160.00	0.7099E+04	.050363809	14291.3
10 155.00	0.7083E+04	.050251182	14873.5
11 150.00	0.7010E+04	.049733263	15499.8
12 145.00	0.6909E+04	.049017962	16175.0
13 140.00	0.6785E+04	.048140636	16904.9
14 135.00	0.6623E+04	.046986874	17696.1
15 130.00	0.6417E+04	.045529697	18556.3
16 125.00	0.6160E+04	.043705527	19494.7
17 120.00	0.5833E+04	.041381977	20521.7
18 115.00	0.5398E+04	.038299467	21650.2
19 110.00	0.4843E+04	.034360565	22895.1
20 105.00	0.4133E+04	.029321644	24274.7
21 100.00	0.3476E+04	.024664491	25811.0
22 95.00	0.2798E+04	.019848656	26475.5
23 90.00	0.2351E+04	.016680922	27194.4
24 85.00	0.2125E+04	.015073949	27975.7
25 80.00	0.1848E+04	.013109522	28829.0
26 75.00	0.1431E+04	.010150595	29765.9
27 70.00	0.7291E+03	.005172638	30801.2
28 65.00	0.8520E+02	.000604517	31953.4
29 60.00	0.5035E+00	.000003572	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH CENTS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.5882E+04
0.2000E+00	0.5138E+04
0.3000E+00	0.4747E+04
0.4000E+00	0.3651E+04
0.5000E+00	0.3626E+04
0.6000E+00	0.3252E+04
0.7000E+00	0.2934E+04
0.8000E+00	0.2415E+04
0.9000E+00	0.2410E+04
0.1000E+01	0.1967E+04
0.1100E+01	0.2199E+04
0.1200E+01	0.1647E+04
0.1300E+01	0.1861E+04
0.1400E+01	0.1742E+04
0.1500E+01	0.1511E+04
0.1600E+01	0.1813E+04
0.1700E+01	0.1447E+04
0.1800E+01	0.1729E+04
0.1900E+01	0.1394E+04
0.2000E+01	0.1358E+04
0.2100E+01	0.1653E+04
0.2200E+01	0.1416E+04
0.2300E+01	0.1351E+04
0.2400E+01	0.1359E+04
0.2500E+01	0.1308E+04
0.2600E+01	0.1577E+04
0.2700E+01	0.1341E+04
0.2800E+01	0.1082E+04

0.2900E+01	0.1338E+04
0.3000E+01	0.1177E+04
0.3100E+01	0.1306E+04
0.3200E+01	0.1155E+04
0.3300E+01	0.1153E+04
0.3400E+01	0.1210E+04
0.3500E+01	0.1109E+04
0.3600E+01	0.1068E+04
0.3700E+01	0.1115E+04
0.3800E+01	0.1053E+04
0.3900E+01	0.1122E+04
0.4000E+01	0.1026E+04
0.4100E+01	0.9678E+03
0.4200E+01	0.1170E+04
0.4300E+01	0.8567E+03
0.4400E+01	0.1047E+04
0.4500E+01	0.9060E+03
0.4600E+01	0.9239E+03
0.4700E+01	0.9575E+03
0.4800E+01	0.9071E+03
0.4900E+01	0.9051E+03
0.5000E+01	0.8310E+03
0.5100E+01	0.8700E+03
0.5200E+01	0.9640E+03
0.5300E+01	0.8136E+03
0.5400E+01	0.9517E+03
0.5500E+01	0.7258E+03
0.5600E+01	0.7362E+03
0.5700E+01	0.8602E+03
0.5800E+01	0.7827E+03
0.5900E+01	0.7507E+03
0.6000E+01	0.6781E+03
0.6100E+01	0.6854E+03
0.6200E+01	0.7769E+03
0.6300E+01	0.6778E+03
0.6400E+01	0.7620E+03
0.6500E+01	0.6967E+03
0.6600E+01	0.6544E+03
0.6700E+01	0.6151E+03
0.6800E+01	0.7118E+03
0.6900E+01	0.5838E+03
0.7000E+01	0.6786E+03
0.7100E+01	0.5183E+03
0.7200E+01	0.6712E+03
0.7300E+01	0.6267E+03
0.7400E+01	0.5370E+03
0.7500E+01	0.5745E+03
0.7600E+01	0.5304E+03
0.7700E+01	0.6918E+03
0.7800E+01	0.5324E+03
0.7900E+01	0.5364E+03
0.8000E+01	0.5561E+03
0.8100E+01	0.5121E+03
0.8200E+01	0.4393E+03
0.8300E+01	0.5597E+03
0.8400E+01	0.5394E+03
0.8500E+01	0.5238E+03
0.8600E+01	0.4422E+03
0.8700E+01	0.4556E+03
0.8800E+01	0.5269E+03
0.8900E+01	0.5046E+03
0.9000E+01	0.5423E+03
0.9100E+01	0.4326E+03
0.9200E+01	0.4473E+03
0.9300E+01	0.4706E+03
0.9400E+01	0.4590E+03
0.9500E+01	0.4649E+03
0.9600E+01	0.4273E+03
0.9700E+01	0.4008E+03
0.9800E+01	0.4113E+03
0.9900E+01	0.4615E+03
0.1000E+02	0.4352E+03
0.1010E+02	0.3999E+03
0.1020E+02	0.4061E+03

0.1030E+02	0.4321E+03
0.1040E+02	0.4208E+03
0.1050E+02	0.3724E+03
0.1060E+02	0.3698E+03
0.1070E+02	0.4269E+03
0.1080E+02	0.3937E+03
0.1090E+02	0.3486E+03
0.1100E+02	0.3747E+03
0.1110E+02	0.3784E+03
0.1120E+02	0.3388E+03
0.1130E+02	0.3618E+03
0.1140E+02	0.3038E+03
0.1150E+02	0.4196E+03
0.1160E+02	0.3626E+03
0.1170E+02	0.2854E+03
0.1180E+02	0.3505E+03
0.1190E+02	0.3002E+03
0.1200E+02	0.3451E+03
0.1210E+02	0.3051E+03
0.1220E+02	0.2906E+03
0.1230E+02	0.2940E+03
0.1240E+02	0.3192E+03
0.1250E+02	0.3067E+03
0.1260E+02	0.3100E+03
0.1270E+02	0.2756E+03
0.1280E+02	0.3162E+03
0.1290E+02	0.2812E+03
0.1300E+02	0.2983E+03
0.1310E+02	0.2886E+03
0.1320E+02	0.2524E+03
0.1330E+02	0.2320E+03
0.1340E+02	0.2828E+03
0.1350E+02	0.2508E+03
0.1360E+02	0.3213E+03
0.1370E+02	0.2287E+03
0.1380E+02	0.2441E+03
0.1390E+02	0.2627E+03
0.1400E+02	0.2265E+03
0.1410E+02	0.3087E+03
0.1420E+02	0.2171E+03
0.1430E+02	0.2153E+03
0.1440E+02	0.2418E+03
0.1450E+02	0.2012E+03
0.1460E+02	0.2497E+03
0.1470E+02	0.2391E+03
0.1480E+02	0.2104E+03
0.1490E+02	0.2205E+03
0.1500E+02	0.2046E+03
0.1510E+02	0.2342E+03
0.1520E+02	0.2194E+03
0.1530E+02	0.2178E+03
0.1540E+02	0.2109E+03
0.1550E+02	0.1861E+03
0.1560E+02	0.2039E+03
0.1570E+02	0.2055E+03
0.1580E+02	0.1806E+03
0.1590E+02	0.2022E+03
0.1600E+02	0.1717E+03
0.1610E+02	0.2169E+03
0.1620E+02	0.2260E+03
0.1630E+02	0.1727E+03
0.1640E+02	0.1611E+03
0.1650E+02	0.1839E+03
0.1660E+02	0.1942E+03
0.1670E+02	0.2011E+03
0.1680E+02	0.1489E+03
0.1690E+02	0.1532E+03
0.1700E+02	0.1721E+03
0.1710E+02	0.1535E+03
0.1720E+02	0.1909E+03
0.1730E+02	0.1516E+03
0.1740E+02	0.1496E+03
0.1750E+02	0.1614E+03
0.1760E+02	0.1402E+03

0.1770E+02	0.1785E+03
0.1780E+02	0.1366E+03
0.1790E+02	0.1645E+03
0.1800E+02	0.1459E+03
0.1810E+02	0.1327E+03
0.1820E+02	0.1683E+03
0.1830E+02	0.1300E+03
0.1840E+02	0.1253E+03
0.1850E+02	0.1405E+03
0.1860E+02	0.1250E+03
0.1870E+02	0.1227E+03
0.1880E+02	0.1524E+03
0.1890E+02	0.1208E+03
0.1900E+02	0.1319E+03
0.1910E+02	0.1420E+03
0.1920E+02	0.1177E+03
0.1930E+02	0.1459E+03
0.1940E+02	0.1131E+03
0.1950E+02	0.1191E+03
0.1960E+02	0.1070E+03
0.1970E+02	0.1033E+03
0.1980E+02	0.1279E+03
0.1990E+02	0.1003E+03
0.2000E+02	0.1086E+03
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.1466E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	REACTION	3P3N	PRODUCT	CR51	Q-VALUE=	10.00 MEV
MEV	MBS	MEV	MBS	MEV	MBS	MEV
13.43	1.09	15.18	1.72	16.79	2.24	18.28
22.05	1.46	23.75	1.07	25.77	0.65	27.04
29.19	0.55	29.66	0.97	31.22	3.50	33.23
36.98	53.20	38.75	68.70	40.79	84.10	42.67
49.00	70.00	52.90	71.60	58.10	52.80	63.00
89.20	70.80	98.90	70.10	108.00	67.30	116.50
133.40	63.60	141.30	60.70	148.90	60.10	154.90
166.20	58.10	166.90	56.90	172.70	56.70	178.40
189.30	54.90	194.50	54.60	199.80	54.10	

THE TOTAL ACTIVATION IS 0.3216E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.4879E+04	.015170566
2	195.00	0.5124E+04	.015933683
3	190.00	0.5388E+04	.016753074
4	185.00	0.1334E+05	.041479568
5	180.00	0.7841E+04	.024380727
6	175.00	0.1535E+05	.047746338
7	170.00	0.2048E+05	.063696511
8	165.00	0.2120E+05	.065911688
9	160.00	0.1992E+05	.061941288
10	155.00	0.1951E+05	.060652301
11	150.00	0.1900E+05	.059093811
12	145.00	0.1844E+05	.057328787
13	140.00	0.1780E+05	.055335697
14	135.00	0.1706E+05	.053056180
15	130.00	0.1623E+05	.050454833
16	125.00	0.1526E+05	.047453757
17	120.00	0.1416E+05	.044040240
18	115.00	0.1294E+05	.040244523
19	110.00	0.1172E+05	.036435474
20	105.00	0.1056E+05	.032832209
21	100.00	0.9550E+04	.029694687
22	95.00	0.8353E+04	.025974518
23	90.00	0.7210E+04	.022420173
24	85.00	0.5561E+04	.017293764
25	80.00	0.3502E+04	.010389265
26	75.00	0.1053E+04	.003273875
27	70.00	0.8583E+02	.000266887
28	65.00	0.5755E+02	.000178960
29	60.00	0.2136E+02	.000066640
30	55.00	0.0000E+00	.000000000

31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
ACTIVATION				
NUCLEI/DAY				
DEPTH	GRAMS/SQ CM			
	0.1000E+00	0.1457E+05		
	0.2000E+00	0.1252E+05		
	0.3000E+00	0.1136E+05		
	0.4000E+00	0.8469E+04		
	0.5000E+00	0.3280E+04		
	0.6000E+00	0.7253E+04		
	0.7000E+00	0.6403E+04		
	0.8000E+00	0.5156E+04		
	0.9000E+00	0.5146E+04		
	0.1000E+01	0.4338E+04		
	0.1100E+01	0.5145E+04		
	0.1200E+01	0.3943E+04		
	0.1300E+01	0.4638E+04		
	0.1400E+01	0.4322E+04		
	0.1500E+01	0.3755E+04		
	0.1600E+01	0.4510E+04		
	0.1700E+01	0.3608E+04		
	0.1800E+01	0.4241E+04		
	0.1900E+01	0.3446E+04		
	0.2000E+01	0.3341E+04		
	0.2100E+01	0.4058E+04		
	0.2200E+01	0.3451E+04		
	0.2300E+01	0.3285E+04		
	0.2400E+01	0.3323E+04		
	0.2500E+01	0.3157E+04		
	0.2600E+01	0.3381E+04		
	0.2700E+01	0.3219E+04		
	0.2800E+01	0.2624E+04		
	0.2900E+01	0.3247E+04		
	0.3000E+01	0.2818E+04		
	0.3100E+01	0.3089E+04		
	0.3200E+01	0.2756E+04		
	0.3300E+01	0.2729E+04		
	0.3400E+01	0.2843E+04		
	0.3500E+01	0.2634E+04		
	0.3600E+01	0.2509E+04		
	0.3700E+01	0.2633E+04		
	0.3800E+01	0.2478E+04		
	0.3900E+01	0.2645E+04		
	0.4000E+01	0.2374E+04		
	0.4100E+01	0.2240E+04		
	0.4200E+01	0.2726E+04		
	0.4300E+01	0.1954E+04		
	0.4400E+01	0.2398E+04		
	0.4500E+01	0.2056E+04		
	0.4600E+01	0.2099E+04		
	0.4700E+01	0.2213E+04		
	0.4800E+01	0.2065E+04		
	0.4900E+01	0.1863E+04		
	0.5000E+01	0.2292E+04		
	0.5100E+01	0.2180E+04		
	0.5200E+01	0.2151E+04		
	0.5300E+01	0.2136E+04		
	0.5400E+01	0.2161E+04		
	0.5500E+01	0.2133E+04		
	0.5600E+01	0.2135E+04		
	0.5700E+01	0.2178E+04		
	0.5800E+01	0.2172E+04		
	0.5900E+01	0.2153E+04		
	0.6000E+01	0.2152E+04		
	0.6100E+01	0.2124E+04		
	0.6200E+01			

0.6300E+01	0.1531E+04
0.6400E+01	0.1724E+04
0.6500E+01	0.1547E+04
0.6600E+01	0.1447E+04
0.6700E+01	0.1399E+04
0.6800E+01	0.1589E+04
0.6900E+01	0.1331E+04
0.7000E+01	0.1499E+04
0.7100E+01	0.1185E+04
0.7200E+01	0.1455E+04
0.7300E+01	0.1419E+04
0.7400E+01	0.1230E+04
0.7500E+01	0.1285E+04
0.7600E+01	0.1192E+04
0.7700E+01	0.1547E+04
0.7800E+01	0.1234E+04
0.7900E+01	0.1193E+04
0.8000E+01	0.1253E+04
0.8100E+01	0.1149E+04
0.8200E+01	0.1014E+04
0.8300E+01	0.1219E+04
0.8400E+01	0.1214E+04
0.8500E+01	0.1161E+04
0.8600E+01	0.9947E+03
0.8700E+01	0.1025E+04
0.8800E+01	0.1132E+04
0.8900E+01	0.1125E+04
0.9000E+01	0.1209E+04
0.9100E+01	0.9602E+03
0.9200E+01	0.9679E+03
0.9300E+01	0.1028E+04
0.9400E+01	0.1001E+04
0.9500E+01	0.9898E+03
0.9600E+01	0.8964E+03
0.9700E+01	0.8736E+03
0.9800E+01	0.8929E+03
0.9900E+01	0.9763E+03
0.1000E+02	0.9145E+03
0.1010E+02	0.8255E+03
0.1020E+02	0.9207E+03
0.1030E+02	0.8777E+03
0.1040E+02	0.9012E+03
0.1050E+02	0.7803E+03
0.1060E+02	0.7973E+03
0.1070E+02	0.9228E+03
0.1080E+02	0.8152E+03
0.1090E+02	0.7390E+03
0.1100E+02	0.8047E+03
0.1110E+02	0.7916E+03
0.1120E+02	0.7193E+03
0.1130E+02	0.7617E+03
0.1140E+02	0.6552E+03
0.1150E+02	0.9159E+03
0.1160E+02	0.7192E+03
0.1170E+02	0.6230E+03
0.1180E+02	0.7054E+03
0.1190E+02	0.6421E+03
0.1200E+02	0.7250E+03
0.1210E+02	0.6490E+03
0.1220E+02	0.6157E+03
0.1230E+02	0.6048E+03
0.1240E+02	0.6414E+03
0.1250E+02	0.6493E+03
0.1260E+02	0.6244E+03
0.1270E+02	0.5739E+03
0.1280E+02	0.6944E+03
0.1290E+02	0.5838E+03
0.1300E+02	0.6294E+03
0.1310E+02	0.5818E+03
0.1320E+02	0.5286E+03
0.1330E+02	0.5058E+03
0.1340E+02	0.5463E+03
0.1350E+02	0.5033E+03
0.1360E+02	0.6086E+03

0.1370E+02	0.4865E+03
0.1380E+02	0.4909E+03
0.1390E+02	0.5193E+03
0.1400E+02	0.4759E+03
0.1410E+02	0.6713E+03
0.1420E+02	0.4550E+03
0.1430E+02	0.4457E+03
0.1440E+02	0.4658E+03
0.1450E+02	0.4283E+03
0.1460E+02	0.4888E+03
0.1470E+02	0.4537E+03
0.1480E+02	0.4265E+03
0.1490E+02	0.4472E+03
0.1500E+02	0.4217E+03
0.1510E+02	0.4746E+03
0.1520E+02	0.4357E+03
0.1530E+02	0.4980E+03
0.1540E+02	0.4189E+03
0.1550E+02	0.3903E+03
0.1560E+02	0.4261E+03
0.1570E+02	0.3940E+03
0.1580E+02	0.3709E+03
0.1590E+02	0.3867E+03
0.1600E+02	0.3618E+03
0.1610E+02	0.4608E+03
0.1620E+02	0.4201E+03
0.1630E+02	0.3500E+03
0.1640E+02	0.3453E+03
0.1650E+02	0.3541E+03
0.1660E+02	0.4194E+03
0.1670E+02	0.3760E+03
0.1680E+02	0.3165E+03
0.1690E+02	0.3112E+03
0.1700E+02	0.3146E+03
0.1710E+02	0.3032E+03
0.1720E+02	0.3470E+03
0.1730E+02	0.2986E+03
0.1740E+02	0.2964E+03
0.1750E+02	0.3009E+03
0.1760E+02	0.2921E+03
0.1770E+02	0.3293E+03
0.1780E+02	0.2836E+03
0.1790E+02	0.3541E+03
0.1800E+02	0.2752E+03
0.1810E+02	0.2674E+03
0.1820E+02	0.2905E+03
0.1830E+02	0.2569E+03
0.1840E+02	0.2533E+03
0.1850E+02	0.2515E+03
0.1860E+02	0.2482E+03
0.1870E+02	0.2466E+03
0.1880E+02	0.2735E+03
0.1890E+02	0.2429E+03
0.1900E+02	0.2437E+03
0.1910E+02	0.3055E+03
0.1920E+02	0.2380E+03
0.1930E+02	0.2579E+03
0.1940E+02	0.2297E+03
0.1950E+02	0.2278E+03
0.1960E+02	0.2211E+03
0.1970E+02	0.2166E+03
0.1980E+02	0.2336E+03
0.1990E+02	0.2103E+03
0.2000E+02	0.2073E+03
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.3208E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 27

MEV	REACTION	4P5N	PRODUCT	V48	Q-VALUE=	35.00 MEV
MEV	MBS	MEV	MBS	MEV	MBS	MEV
38.75	0.24	40.79	0.73	42.67	1.58	44.53
52.90	5.20	58.10	5.60	63.00	4.90	79.00
98.90	15.20	108.00	15.30	116.50	15.20	125.10
					15.70	133.40
						16.20

141.30	16.10	148.90	16.50	154.90	17.00	160.90	16.20	166.20	17.10
166.90	16.30	172.70	16.30	178.40	16.20	183.90	16.30	189.30	16.40
194.50	16.80	199.80	17.00						

THE TOTAL ACTIVATION IS 0.6271E+05 NUCLEI /DAY

	PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.4489E+04	.071581714	10794.0
2	195.00	0.4484E+04	.071508735	11143.3
3	190.00	0.4461E+04	.071145132	11513.3
4	185.00	0.4405E+04	.070246838	11906.1
5	180.00	0.4303E+04	.068625204	12323.5
6	175.00	0.4181E+04	.066681184	12768.0
7	170.00	0.4029E+04	.064247936	13242.1
8	165.00	0.3861E+04	.061569903	13748.7
9	160.00	0.3668E+04	.058489928	14291.3
10	155.00	0.3455E+04	.055092722	14873.5
11	150.00	0.3225E+04	.051429715	15499.8
12	145.00	0.2984E+04	.047589995	16175.0
13	140.00	0.2731E+04	.043558583	16904.9
14	135.00	0.2462E+04	.039254840	17696.1
15	130.00	0.2165E+04	.034530707	18556.3
16	125.00	0.1843E+04	.029388156	19494.7
17	120.00	0.1505E+04	.024006572	20521.7
18	115.00	0.1182E+04	.018854180	21650.2
19	110.00	0.9285E+03	.014806990	22895.1
20	105.00	0.7594E+03	.012109797	24274.7
21	100.00	0.6144E+03	.009797935	25811.0
22	95.00	0.4601E+03	.007336731	26475.5
23	90.00	0.3117E+03	.004970517	27194.4
24	85.00	0.1546E+03	.002466169	27975.7
25	80.00	0.4292E+02	.000684391	28829.0
26	75.00	0.1647E+01	.000026262	29765.9
27	70.00	0.0000E+00	.000000000	30801.2
28	65.00	0.0000E+00	.000000000	31953.4
29	60.00	0.0000E+00	.000000000	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.2737E+04
0.2000E+00	0.2414E+04
0.3000E+00	0.2225E+04
0.4000E+00	0.1691E+04
0.5000E+00	0.1656E+04
0.6000E+00	0.1458E+04
0.7000E+00	0.1296E+04
0.8000E+00	0.1042E+04
0.9000E+00	0.1042E+04
0.1000E+01	0.8470E+03
0.1100E+01	0.9904E+03
0.1200E+01	0.7475E+03
0.1300E+01	0.8745E+03
0.1400E+01	0.8275E+03
0.1500E+01	0.7143E+03
0.1600E+01	0.8597E+03
0.1700E+01	0.6864E+03
0.1800E+01	0.8188E+03
0.1900E+01	0.6586E+03
0.2000E+01	0.6407E+03
0.2100E+01	0.7845E+03
0.2200E+01	0.6673E+03
0.2300E+01	0.6334E+03
0.2400E+01	0.6458E+03
0.2500E+01	0.6128E+03

0.2600E+01	0.7434E+03
0.2700E+01	0.6293E+03
0.2800E+01	0.5043E+03
0.2900E+01	0.6341E+03
0.3000E+01	0.5538E+03
0.3100E+01	0.6095E+03
0.3200E+01	0.5389E+03
0.3300E+01	0.5381E+03
0.3400E+01	0.5600E+03
0.3500E+01	0.5179E+03
0.3600E+01	0.4968E+03
0.3700E+01	0.5169E+03
0.3800E+01	0.4897E+03
0.3900E+01	0.5191E+03
0.4000E+01	0.4709E+03
0.4100E+01	0.4446E+03
0.4200E+01	0.5449E+03
0.4300E+01	0.3893E+03
0.4400E+01	0.4793E+03
0.4500E+01	0.4104E+03
0.4600E+01	0.4199E+03
0.4700E+01	0.4378E+03
0.4800E+01	0.4129E+03
0.4900E+01	0.4134E+03
0.5000E+01	0.3729E+03
0.5100E+01	0.3943E+03
0.5200E+01	0.4394E+03
0.5300E+01	0.3680E+03
0.5400E+01	0.4270E+03
0.5500E+01	0.3226E+03
0.5600E+01	0.3269E+03
0.5700E+01	0.3805E+03
0.5800E+01	0.3549E+03
0.5900E+01	0.3374E+03
0.6000E+01	0.3047E+03
0.6100E+01	0.3018E+03
0.6200E+01	0.3453E+03
0.6300E+01	0.3010E+03
0.6400E+01	0.3405E+03
0.6500E+01	0.3128E+03
0.6600E+01	0.2920E+03
0.6700E+01	0.2777E+03
0.6800E+01	0.3179E+03
0.6900E+01	0.2629E+03
0.7000E+01	0.3032E+03
0.7100E+01	0.2311E+03
0.7200E+01	0.2935E+03
0.7300E+01	0.2800E+03
0.7400E+01	0.2426E+03
0.7500E+01	0.2579E+03
0.7600E+01	0.2363E+03
0.7700E+01	0.3066E+03
0.7800E+01	0.2402E+03
0.7900E+01	0.2359E+03
0.8000E+01	0.2486E+03
0.8100E+01	0.2286E+03
0.8200E+01	0.1972E+03
0.8300E+01	0.2483E+03
0.8400E+01	0.2403E+03
0.8500E+01	0.2323E+03
0.8600E+01	0.1946E+03
0.8700E+01	0.2017E+03
0.8800E+01	0.2238E+03
0.8900E+01	0.2235E+03
0.9000E+01	0.2364E+03
0.9100E+01	0.1895E+03
0.9200E+01	0.1928E+03
0.9300E+01	0.2062E+03
0.9400E+01	0.1979E+03
0.9500E+01	0.2003E+03
0.9600E+01	0.1810E+03
0.9700E+01	0.1733E+03
0.9800E+01	0.1775E+03
0.9900E+01	0.1972E+03

0.1000E+02	0.1852E+03
0.1010E+02	0.1667E+03
0.1020E+02	0.1747E+03
0.1030E+02	0.1806E+03
0.1040E+02	0.1787E+03
0.1050E+02	0.1558E+03
0.1060E+02	0.1575E+03
0.1070E+02	0.1779E+03
0.1080E+02	0.1637E+03
0.1090E+02	0.1439E+03
0.1100E+02	0.1550E+03
0.1110E+02	0.1564E+03
0.1120E+02	0.1391E+03
0.1130E+02	0.1517E+03
0.1140E+02	0.1255E+03
0.1150E+02	0.1752E+03
0.1160E+02	0.1464E+03
0.1170E+02	0.1188E+03
0.1180E+02	0.1421E+03
0.1190E+02	0.1239E+03
0.1200E+02	0.1419E+03
0.1210E+02	0.1263E+03
0.1220E+02	0.1182E+03
0.1230E+02	0.1174E+03
0.1240E+02	0.1286E+03
0.1250E+02	0.1247E+03
0.1260E+02	0.1246E+03
0.1270E+02	0.1101E+03
0.1280E+02	0.1279E+03
0.1290E+02	0.1126E+03
0.1300E+02	0.1210E+03
0.1310E+02	0.1150E+03
0.1320E+02	0.1012E+03
0.1330E+02	0.9435E+02
0.1340E+02	0.1097E+03
0.1350E+02	0.9680E+02
0.1360E+02	0.1216E+03
0.1370E+02	0.8883E+02
0.1380E+02	0.9206E+02
0.1390E+02	0.1009E+03
0.1400E+02	0.8909E+02
0.1410E+02	0.1251E+03
0.1420E+02	0.8616E+02
0.1430E+02	0.8504E+02
0.1440E+02	0.9328E+02
0.1450E+02	0.7941E+02
0.1460E+02	0.9488E+02
0.1470E+02	0.8896E+02
0.1480E+02	0.7871E+02
0.1490E+02	0.8319E+02
0.1500E+02	0.7610E+02
0.1510E+02	0.8704E+02
0.1520E+02	0.8126E+02
0.1530E+02	0.8488E+02
0.1540E+02	0.7860E+02
0.1550E+02	0.7006E+02
0.1560E+02	0.7846E+02
0.1570E+02	0.7496E+02
0.1580E+02	0.6688E+02
0.1590E+02	0.7262E+02
0.1600E+02	0.6340E+02
0.1610E+02	0.7889E+02
0.1620E+02	0.7909E+02
0.1630E+02	0.6157E+02
0.1640E+02	0.5934E+02
0.1650E+02	0.6537E+02
0.1660E+02	0.7106E+02
0.1670E+02	0.7235E+02
0.1680E+02	0.5549E+02
0.1690E+02	0.5568E+02
0.1700E+02	0.5979E+02
0.1710E+02	0.5392E+02
0.1720E+02	0.6553E+02
0.1730E+02	0.5208E+02

0.1740E+02	0.5130E+02
0.1750E+02	0.5451E+02
0.1760E+02	0.4889E+02
0.1770E+02	0.5026E+02
0.1780E+02	0.4757E+02
0.1790E+02	0.5708E+02
0.1800E+02	0.4905E+02
0.1810E+02	0.4515E+02
0.1820E+02	0.5482E+02
0.1830E+02	0.4344E+02
0.1840E+02	0.4249E+02
0.1850E+02	0.4488E+02
0.1860E+02	0.4117E+02
0.1870E+02	0.4038E+02
0.1880E+02	0.4829E+02
0.1890E+02	0.3874E+02
0.1900E+02	0.4040E+02
0.1910E+02	0.4582E+02
0.1920E+02	0.3662E+02
0.1930E+02	0.4361E+02
0.1940E+02	0.3532E+02
0.1950E+02	0.3665E+02
0.1960E+02	0.3412E+02
0.1970E+02	0.3356E+02
0.1980E+02	0.3961E+02
0.1990E+02	0.3236E+02
0.2000E+02	0.3332E+02
0.2010E+02	0.0000E+00
0.2020E+02	0.0000E+00
0.2030E+02	0.0000E+00

TOTAL OF AZ= 0.6260E+05

ENTER THE NAME OF THE DATA FILE BEING USED
PNID

THE TARGET IS NI
TM,C,AND A ARE 58.710 148.000 3.300
NCM= 10 NQM= 2 NMC= 3
THE COVERING MATERIAL IS ALUM
TC,CC, AND AC ARE 27.000 184.000 5.200
THICKNESS OF COVERING MATERIAL 2.57
THE INELASTIC XSECTIONS FOR COVERING
MEV MBS MEV MBS MEV MBS MEV MBS
10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
THE INELASTIC XSECTIONS OF THE TARGET
MEV MBS MEV MBS MEV MBS MEV MBS
10.00 813.00 17.00 922.00 30.00 932.00 35.00 922.00 40.00 911.00
60.00 828.00 100.00 777.00 225.00 708.00 340.00 703.00 460.00 730.00
TARGET THICKNESS 2.826 GM*CM**2 WIDTH 5.080CM LENGTH 5.080 CM
INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
200.00 5.00 5.00 0.100 9
THE NUMBER OF REACTIONS EQUAL 9
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 25
REACTION 4PN PRODUCT MN54 Q-VALUE= 33.00 MEV
MEV MBS MEV MBS MEV MBS MEV MBS
41.00 0.60 44.00 1.90 48.00 4.70 50.00 8.10 52.00 15.00
56.00 21.00 77.40 23.90 87.70 21.60 97.50 20.20 106.70 20.00
115.30 19.20 124.00 19.20 132.20 19.00 140.20 18.70 147.90 18.10
153.90 19.10 159.90 18.50 165.30 17.70 165.90 18.20 177.40 17.90
177.70 18.00 182.90 17.90 188.40 17.80 193.60 17.50 198.90 17.70
THE TOTAL ACTIVATION IS 0.2777E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.7029E+03	.025309395	10794.0
2 195.00	0.7283E+03	.026222430	11143.3
3 190.00	0.7536E+03	.027132912	11513.3
4 185.00	0.7877E+03	.028360333	11906.1
5 180.00	0.8384E+03	.030186374	12323.5
6 175.00	0.8609E+03	.030997304	12768.0
7 170.00	0.8819E+03	.031752195	13242.1
8 165.00	0.9302E+03	.033490915	13748.7
9 160.00	0.9797E+03	.035272982	14291.3
10 155.00	0.1028E+04	.037029941	14873.5
11 150.00	0.1077E+04	.038767714	15499.8
12 145.00	0.1129E+04	.040644333	16175.0
13 140.00	0.1199E+04	.043161705	16904.9
14 135.00	0.1278E+04	.046029910	17696.1
15 130.00	0.1361E+04	.049000878	18556.3
16 125.00	0.1469E+04	.052888758	19494.7
17 120.00	0.1619E+04	.058292974	20521.7
18 115.00	0.1789E+04	.064396702	21650.2
19 110.00	0.1915E+04	.068964861	22895.1
20 105.00	0.1981E+04	.071332470	24274.7
21 100.00	0.1952E+04	.070282072	25811.0
22 95.00	0.1436E+04	.051689588	26475.5
23 90.00	0.8035E+03	.028932031	27194.4
24 85.00	0.2365E+03	.008515773	27975.7
25 80.00	0.3501E+02	.001260576	28829.0
26 75.00	0.2356E+01	.000084832	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0

39	10.00	0.0000E+00	.0000000000	85533.0
40	5.00	0.0000E+00	.0000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.1081E+04		
0.2000E+00		0.1068E+04		
0.3000E+00		0.1057E+04		
0.4000E+00		0.1048E+04		
0.5000E+00		0.1038E+04		
0.6000E+00		0.1029E+04		
0.7000E+00		0.1021E+04		
0.8000E+00		0.1015E+04		
0.9000E+00		0.1009E+04		
0.1000E+01		0.9992E+03		
0.1100E+01		0.9875E+03		
0.1200E+01		0.9775E+03		
0.1300E+01		0.9700E+03		
0.1400E+01		0.9616E+03		
0.1500E+01		0.9531E+03		
0.1600E+01		0.9460E+03		
0.1700E+01		0.9396E+03		
0.1800E+01		0.9338E+03		
0.1900E+01		0.9268E+03		
0.2000E+01		0.9150E+03		
0.2100E+01		0.9050E+03		
0.2200E+01		0.8974E+03		
0.2300E+01		0.8913E+03		
0.2400E+01		0.8834E+03		
0.2500E+01		0.8763E+03		
0.2600E+01		0.8699E+03		
0.2700E+01		0.8641E+03		
0.2800E+01		0.8588E+03		
0.2900E+01		0.8510E+03		

TOTAL OF AZ= 0.2777E+05
 THE NUMBER OF CROSS SECTION DATA POINTS IS 55

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	0.39 MEV
0.30	0.01	11.90	1.52	13.98	1.78	15.85	1.81	17.78	1.78		
19.88	2.50	21.84	3.80	23.66	4.16	25.78	5.14	27.77	10.00		
28.73	16.00	29.66	21.90	30.88	32.40	32.99	50.00	35.00	62.00		
36.93	68.80	38.76	75.80	40.83	72.60	42.81	63.90	44.72	62.80		
46.50	68.30	48.00	66.90	50.50	65.40	56.00	54.10	57.00	52.60		
60.50	49.80	62.50	49.80	63.50	51.20	66.50	44.10	67.00	49.80		
69.00	51.20	71.00	46.95	73.00	42.70	76.00	44.10	77.40	33.90		
77.50	44.10	78.50	41.30	87.70	31.50	97.50	29.10	106.70	27.50		
115.30	26.20	124.00	25.30	132.20	24.60	140.20	23.80	147.90	22.70		
153.90	23.10	159.90	23.10	165.30	19.70	165.90	22.70	177.40	22.00		
177.70	22.50	182.90	21.80	188.40	21.30	193.60	20.40	198.90	19.60		

THE TOTAL ACTIVATION IS 0.6263E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.8671E+03	.013844422
2	195.00	0.9003E+03	.014373825
3	190.00	0.9137E+03	.014587610
4	185.00	0.9470E+03	.015119974
5	180.00	0.1028E+04	.016418917
6	175.00	0.1061E+04	.016945640
7	170.00	0.1110E+04	.017720057
8	165.00	0.1185E+04	.018923635
9	160.00	0.1263E+04	.020166740
10	155.00	0.1342E+04	.021432210
11	150.00	0.1428E+04	.022801973
12	145.00	0.1526E+04	.024365559
13	140.00	0.1642E+04	.026212312
14	135.00	0.1778E+04	.028382150
15	130.00	0.1935E+04	.030901784
16	125.00	0.2128E+04	.033980317
17	120.00	0.2462E+04	.039312091
18	115.00	0.2946E+04	.047043234
19	110.00	0.3587E+04	.057267759
20	105.00	0.4129E+04	.065927304
21	100.00	0.4808E+04	.076763362
22	95.00	0.5471E+04	.087350212
23	90.00	0.6214E+04	.099209689
24	85.00	0.5498E+04	.087779857

25	80.00	0.3816E+04	.060923286	28829.0
26	75.00	0.2041E+04	.032593109	29765.9
27	70.00	0.4878E+03	.007788524	30801.2
28	65.00	0.8927E+02	.001425362	31953.4
29	60.00	0.2590E+02	.000413563	33246.3
30	55.00	0.1589E+01	.000025365	34711.2
31	50.00	0.3262E-02	.000000052	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.2489E+04
0.2000E+00	0.2466E+04
0.3000E+00	0.2434E+04
0.4000E+00	0.2394E+04
0.5000E+00	0.2375E+04
0.6000E+00	0.2364E+04
0.7000E+00	0.2341E+04
0.8000E+00	0.2309E+04
0.9000E+00	0.2271E+04
0.1000E+01	0.2238E+04
0.1100E+01	0.2193E+04
0.1200E+01	0.2196E+04
0.1300E+01	0.2202E+04
0.1400E+01	0.2200E+04
0.1500E+01	0.2174E+04
0.1600E+01	0.2153E+04
0.1700E+01	0.2111E+04
0.1800E+01	0.2051E+04
0.1900E+01	0.2032E+04
0.2000E+01	0.2030E+04
0.2100E+01	0.2028E+04
0.2200E+01	0.2004E+04
0.2300E+01	0.2005E+04
0.2400E+01	0.1997E+04
0.2500E+01	0.1978E+04
0.2600E+01	0.1946E+04
0.2700E+01	0.1907E+04
0.2800E+01	0.1884E+04
0.2900E+01	0.1862E+04

TOTAL OF AZ= 0.6263E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 32

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	9.90 MEV
9.80	0.01	23.66	0.70	25.78	0.86	27.77	0.89	28.73	0.96		
29.66	0.75	30.88	0.92	32.99	1.00	35.00	1.10	36.93	1.71		
38.76	1.81	40.83	2.02	44.72	1.95	77.40	1.86	87.70	1.79		
97.50	1.91	106.70	1.64	115.30	1.57	124.00	1.65	132.20	1.60		
140.20	1.74	147.90	1.54	153.90	1.69	159.90	1.77	165.30	1.34		
165.90	1.79	177.40	1.69	177.70	1.65	182.90	1.69	188.40	1.73		
193.60	1.71	198.90	1.64								

THE TOTAL ACTIVATION IS 0.2916E+04 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
1	0.6592E+02	.022605784
2	0.6987E+02	.023961851
3	0.6939E+02	.023797000
4	0.7006E+02	.024027878
5	0.7644E+02	.026213409
6	0.7512E+02	.025760747
7	0.7775E+02	.026665078
8	0.8383E+02	.028750630
9	0.8529E+02	.029250789
10	0.8757E+02	.030031314
11	0.9123E+02	.031285606
12	0.9367E+02	.032124747
13	0.9846E+02	.033765547
14	0.1088E+03	.037314817

PROTON FLUX	10794.0
PROTONS/DAY*CH**2	11143.3
	11513.3
	11906.1
	12323.5
	12768.0
	13242.1
	13748.7
	14291.3
	14873.5
	15499.8
	16175.0
	16904.9
	17696.1

15	130.00	0.1218E+03	.041786551	18556.3
16	125.00	0.1303E+03	.044703014	19494.7
17	120.00	0.1354E+03	.046444725	20321.7
18	115.00	0.1435E+03	.049204553	21650.2
19	110.00	0.1541E+03	.052833892	22895.1
20	105.00	0.1651E+03	.056604497	24274.7
21	100.00	0.1770E+03	.060688347	25811.0
22	95.00	0.1831E+03	.062797457	26475.5
23	90.00	0.1833E+03	.062864594	27194.4
24	85.00	0.1578E+03	.054121077	27975.7
25	80.00	0.1125E+03	.038572960	28829.0
26	75.00	0.6137E+02	.021045081	29765.9
27	70.00	0.2821E+02	.009675220	30801.2
28	65.00	0.8406E+01	.002882813	31953.4
29	60.00	0.6415E+00	.000219992	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH

GRAMS/SQ CM

ACTIVATION

NUCLEI/DAY

0.1000E+00	0.1156E+03
0.2000E+00	0.1141E+03
0.3000E+00	0.1127E+03
0.4000E+00	0.1109E+03
0.5000E+00	0.1096E+03
0.6000E+00	0.1091E+03
0.7000E+00	0.1081E+03
0.8000E+00	0.1068E+03
0.9000E+00	0.1054E+03
0.1000E+01	0.1050E+03
0.1100E+01	0.1036E+03
0.1200E+01	0.1024E+03
0.1300E+01	0.1019E+03
0.1400E+01	0.1014E+03
0.1500E+01	0.1002E+03
0.1600E+01	0.9899E+02
0.1700E+01	0.9777E+02
0.1800E+01	0.9806E+02
0.1900E+01	0.9683E+02
0.2000E+01	0.9563E+02
0.2100E+01	0.9459E+02
0.2200E+01	0.9373E+02
0.2300E+01	0.9277E+02
0.2400E+01	0.9176E+02
0.2500E+01	0.9061E+02
0.2600E+01	0.9080E+02
0.2700E+01	0.9028E+02
0.2800E+01	0.8912E+02
0.2900E+01	0.8798E+02

TOTAL OF AZ= 0.2916E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 25

MEV	REACTION	4P3N	PRODUCT	MN52	Q-VALUE=	38.77 MEV
MBS	MEV	MBS	MEV	MBS	MEV	MBS
38.76	0.18	40.83	0.41	42.81	0.99	44.72
56.00	8.40	77.40	13.90	87.70	13.60	97.50
115.30	15.90	124.00	16.10	132.20	16.10	140.20
153.90	16.40	159.90	16.20	165.30	15.90	165.90
177.70	16.00	182.90	15.60	188.40	15.70	193.60
					15.70	198.90

THE TOTAL ACTIVATION IS 0.1941E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.6181E+03	.031845491
2	195.00	0.6394E+03	.032939188
3	190.00	0.6654E+03	.034281153
4	185.00	0.6948E+03	.035795383
5	180.00	0.7274E+03	.037477102
6	175.00	0.7477E+03	.038521621

159.90 3.55 165.30 3.49 165.90 3.50 177.40 3.31 177.70 3.36
 182.90 3.24 188.40 3.25 193.60 3.16 198.90 3.12 400.00 3.50

THE TOTAL ACTIVATION IS 0.1014E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1299E+03	.012816818	10794.0
2 195.00	0.1368E+03	.013493174	11143.3
3 190.00	0.1447E+03	.014280173	11513.3
4 185.00	0.1527E+03	.015066018	11906.1
5 180.00	0.1633E+03	.016108645	12323.5
6 175.00	0.1721E+03	.016982801	12768.0
7 170.00	0.1809E+03	.017852517	13242.1
8 165.00	0.1933E+03	.019075217	13748.7
9 160.00	0.2047E+03	.020196645	14291.3
10 155.00	0.2178E+03	.021489529	14873.5
11 150.00	0.2326E+03	.022954077	15499.8
12 145.00	0.2484E+03	.024508258	16175.0
13 140.00	0.2695E+03	.026593614	16904.9
14 135.00	0.2959E+03	.029198274	17696.1
15 130.00	0.3249E+03	.032059286	18556.3
16 125.00	0.3581E+03	.035335701	19494.7
17 120.00	0.3985E+03	.039320376	20521.7
18 115.00	0.4678E+03	.046159457	21650.2
19 110.00	0.5932E+03	.058530942	22895.1
20 105.00	0.7330E+03	.072322354	24274.7
21 100.00	0.8511E+03	.083969928	25811.0
22 95.00	0.9460E+03	.093337223	26475.5
23 90.00	0.1002E+04	.098860659	27194.4
24 85.00	0.8369E+03	.082574151	27975.7
25 80.00	0.5471E+03	.053981036	28829.0
26 75.00	0.2624E+03	.025890296	29765.9
27 70.00	0.6278E+02	.006194128	30801.2
28 65.00	0.8518E+01	.000840443	31953.4
29 60.00	0.8169E-01	.000008060	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.4001E+03		
0.2000E+00	0.3957E+03		
0.3000E+00	0.3912E+03		
0.4000E+00	0.3873E+03		
0.5000E+00	0.3837E+03		
0.6000E+00	0.3816E+03		
0.7000E+00	0.3796E+03		
0.8000E+00	0.3742E+03		
0.9000E+00	0.3678E+03		
0.1000E+01	0.3616E+03		
0.1100E+01	0.3585E+03		
0.1200E+01	0.3572E+03		
0.1300E+01	0.3549E+03		
0.1400E+01	0.3532E+03		
0.1500E+01	0.3501E+03		
0.1600E+01	0.3466E+03		
0.1700E+01	0.3412E+03		
0.1800E+01	0.3350E+03		
0.1900E+01	0.3316E+03		
0.2000E+01	0.3304E+03		
0.2100E+01	0.3291E+03		
0.2200E+01	0.3274E+03		
0.2300E+01	0.3254E+03		
0.2400E+01	0.3222E+03		
0.2500E+01	0.3191E+03		
0.2600E+01	0.3123E+03		
0.2700E+01	0.3082E+03		
0.2800E+01	0.3050E+03		

0.2900E+01 0.3051E+03
 TOTAL OF AZ= 0.1014E+05
 THE NUMBER OF CROSS SECTION DATA POINTS IS 46
 REACTION P, PN PRODUCT NI57 Q-VALUE= 9.98 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 9.97 0.01 11.90 0.02 13.98 0.62 15.85 15.10 17.78 61.80
 19.88 116.00 21.84 140.00 23.66 159.00 25.78 171.00 27.77 174.00
 28.73 167.00 29.66 155.00 30.88 142.00 32.99 118.00 35.00 103.00
 36.93 94.60 38.76 87.40 40.83 84.40 42.81 81.40 44.72 79.70
 47.00 82.50 54.00 79.50 57.00 82.50 62.50 75.00 66.50 72.00
 71.00 73.50 75.50 69.00 77.40 56.40 87.70 50.90 97.50 46.00
 106.70 42.80 115.30 40.50 124.00 38.70 132.20 37.60 140.20 36.30
 147.90 35.00 153.90 34.50 159.90 33.30 165.30 32.30 165.90 32.70
 177.40 31.10 177.70 32.10 182.90 30.40 188.40 30.00 193.60 19.50
 198.90 29.30

THE TOTAL ACTIVATION IS 0.1134E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1226E+04	.010810411	10794.0
2 195.00	0.1282E+04	.0111304209	11143.3
3 190.00	0.1351E+04	.011910853	11513.3
4 185.00	0.1424E+04	.012554213	11906.1
5 180.00	0.1517E+04	.013375657	12323.5
6 175.00	0.1608E+04	.014176627	12768.0
7 170.00	0.1701E+04	.015001383	13242.1
8 165.00	0.1811E+04	.015970295	13748.7
9 160.00	0.1929E+04	.017011579	14291.3
10 155.00	0.2053E+04	.018097265	14873.5
11 150.00	0.2190E+04	.019309336	15499.8
12 145.00	0.2353E+04	.020750202	16175.0
13 140.00	0.2546E+04	.022450266	16904.9
14 135.00	0.2776E+04	.024474237	17696.1
15 130.00	0.3052E+04	.026906494	18556.3
16 125.00	0.3390E+04	.029893750	19494.7
17 120.00	0.3795E+04	.033460647	20521.7
18 115.00	0.4451E+04	.039247993	21650.2
19 110.00	0.5369E+04	.047339536	22895.1
20 105.00	0.6355E+04	.056035824	24274.7
21 100.00	0.7120E+04	.062779516	25811.0
22 95.00	0.7568E+04	.066729501	26475.5
23 90.00	0.8171E+04	.072042771	27194.4
24 85.00	0.1041E+05	.091814764	27975.7
25 80.00	0.1050E+05	.092602089	28829.0
26 75.00	0.8570E+04	.075565755	29765.9
27 70.00	0.6181E+04	.054496910	30801.2
28 65.00	0.2605E+04	.022970892	31953.4
29 60.00	0.1040E+03	.000916880	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.4594E+04
0.2000E+00	0.4537E+04
0.3000E+00	0.4553E+04
0.4000E+00	0.4546E+04
0.5000E+00	0.4405E+04
0.6000E+00	0.4252E+04
0.7000E+00	0.4176E+04
0.8000E+00	0.4177E+04
0.9000E+00	0.4179E+04
0.1000E+01	0.4183E+04
0.1100E+01	0.4089E+04
0.1200E+01	0.3947E+04
0.1300E+01	0.3879E+04
0.1400E+01	0.3886E+04
0.1500E+01	0.3888E+04

0.1600E+01	0.3883E+04
0.1700E+01	0.3861E+04
0.1800E+01	0.3771E+04
0.1900E+01	0.3643E+04
0.2000E+01	0.3584E+04
0.2100E+01	0.3589E+04
0.2200E+01	0.3599E+04
0.2300E+01	0.3599E+04
0.2400E+01	0.3596E+04
0.2500E+01	0.3536E+04
0.2600E+01	0.3447E+04
0.2700E+01	0.3357E+04
0.2800E+01	0.3328E+04
0.2900E+01	0.3333E+04

TOTAL OF AZ= 0.1134E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48

REACTION	P.A	PRODUCT	CO55	Q-VALUE=	1.36 MEV
MEV	MBS	MEV	MBS	MEV	MBS
1.35	0.01	7.44	0.07	7.97	0.27
9.73	4.50	10.08	6.33	10.80	10.70
12.20	14.30	13.98	22.60	15.85	28.00
21.84	12.20	23.66	7.54	25.78	4.18
29.66	2.60	30.88	2.70	32.99	2.52
38.76	5.74	40.83	9.24	42.81	13.50
87.70	30.60	97.50	27.00	106.70	24.60
132.20	22.40	140.20	20.70	147.90	20.80
165.30	20.40	165.90	21.20	177.40	18.80
188.40	19.60	193.60	17.60	198.90	19.00

THE TOTAL ACTIVATION IS 0.3968E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	0.7578E+03	.019097013
2	195.00	0.7967E+03	.020076927
3	190.00	0.8572E+03	.021601353
4	185.00	0.8938E+03	.022524145
5	180.00	0.9580E+03	.024142174
6	175.00	0.9949E+03	.025072452
7	170.00	0.1000E+04	.025211584
8	165.00	0.1048E+04	.026406860
9	160.00	0.1135E+04	.028594978
10	155.00	0.1228E+04	.030935613
11	150.00	0.1311E+04	.033026170
12	145.00	0.1393E+04	.035114981
13	140.00	0.1485E+04	.037411373
14	135.00	0.1509E+04	.040551476
15	130.00	0.1784E+04	.044961501
16	125.00	0.2010E+04	.050650030
17	120.00	0.2254E+04	.056797337
18	115.00	0.2462E+04	.062051214
19	110.00	0.2535E+04	.063874528
20	105.00	0.2480E+04	.062500201
21	100.00	0.2372E+04	.059770145
22	95.00	0.2169E+04	.054649238
23	90.00	0.1658E+04	.041791748
24	85.00	0.1100E+04	.027723663
25	80.00	0.1055E+04	.026593873
26	75.00	0.7399E+03	.018646659
27	70.00	0.6668E+03	.016803382
28	65.00	0.6146E+03	.015488008
29	60.00	0.3131E+03	.007890648
30	55.00	0.1624E+01	.000040933
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

DEPTH
GRAMS/SQ CM
0.1000E+00
0.2000E+00

ACTIVATION
NUCLEI/DAY
0.1579E+04
0.1565E+04

0.3000E+00	0.1534E+04
0.4000E+00	0.1517E+04
0.5000E+00	0.1491E+04
0.6000E+00	0.1491E+04
0.7000E+00	0.1477E+04
0.8000E+00	0.1449E+04
0.9000E+00	0.1432E+04
0.1000E+01	0.1416E+04
0.1100E+01	0.1418E+04
0.1200E+01	0.1415E+04
0.1300E+01	0.1397E+04
0.1400E+01	0.1365E+04
0.1500E+01	0.1342E+04
0.1600E+01	0.1313E+04
0.1700E+01	0.1331E+04
0.1800E+01	0.1342E+04
0.1900E+01	0.1339E+04
0.2000E+01	0.1316E+04
0.2100E+01	0.1279E+04
0.2200E+01	0.1248E+04
0.2300E+01	0.1222E+04
0.2400E+01	0.1233E+04
0.2500E+01	0.1246E+04
0.2600E+01	0.1257E+04
0.2700E+01	0.1253E+04
0.2800E+01	0.1228E+04
0.2900E+01	0.1192E+04

TOTAL OF AZ= 0.3968E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	1.84 NEV
11.70	0.01	15.85	0.01	17.78	0.02	19.88	0.76	21.84	4.81		
23.66	9.30	25.78	15.80	27.77	34.00	28.73	47.80	29.66	67.70		
30.88	91.60	32.99	142.00	35.00	172.00	36.93	194.00	38.76	198.00		
40.83	211.00	42.81	197.00	44.72	177.00	48.00	186.00	54.00	138.00		
57.00	128.00	62.50	124.00	67.00	116.00	71.00	118.00	77.40	84.10		
87.70	74.00	97.50	65.90	106.70	60.90	115.30	57.10	124.00	54.80		
132.20	52.50	140.20	50.90	147.90	48.50	153.90	47.80	159.90	45.90		
165.30	45.20	165.90	44.40	177.40	42.50	177.70	43.50	182.90	41.80		
188.40	41.50	193.60	40.40	198.90	40.20						

THE TOTAL ACTIVATION IS 0.1505E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1673E+04	.011119732	10794.0
2 195.00	0.1748E+04	.011613869	11143.3
3 190.00	0.1851E+04	.012302678	11513.3
4 185.00	0.1969E+04	.013087456	11906.1
5 180.00	0.2098E+04	.013939123	12323.5
6 175.00	0.2228E+04	.014807168	12768.0
7 170.00	0.2368E+04	.015736833	13242.1
8 165.00	0.2533E+04	.016835807	13748.7
9 160.00	0.2700E+04	.017943878	14291.3
10 155.00	0.2885E+04	.019171325	14873.5
11 150.00	0.3093E+04	.020554667	15499.8
12 145.00	0.3325E+04	.022095677	16175.0
13 140.00	0.3607E+04	.023967998	16904.9
14 135.00	0.3953E+04	.026266703	17696.1
15 130.00	0.4369E+04	.029034745	18556.3
16 125.00	0.4890E+04	.032495677	19494.7
17 120.00	0.5534E+04	.036775492	20521.7
18 115.00	0.6471E+04	.043000236	21650.2
19 110.00	0.8111E+04	.053900652	22895.1
20 105.00	0.9946E+04	.066093646	24274.7
21 100.00	0.1172E+05	.077908568	25811.0
22 95.00	0.1394E+05	.0926449393	26475.5
23 90.00	0.1655E+05	.109997720	27194.4
24 85.00	0.1524E+05	.101292126	27975.7
25 80.00	0.1072E+05	.071249798	28829.0
26 75.00	0.5584E+04	.037111711	29765.9
27 70.00	0.1277E+04	.008488965	30801.2
28 65.00	0.8358E+02	.000555456	31953.4
29 60.00	0.2952E+00	.000001962	33246.3
30 55.00	0.1278E+00	.000000849	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7

33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00		0.5955E+04	
0.2000E+00		0.5890E+04	
0.3000E+00		0.5835E+04	
0.4000E+00		0.5786E+04	
0.5000E+00		0.5748E+04	
0.6000E+00		0.5721E+04	
0.7000E+00		0.5616E+04	
0.8000E+00		0.5516E+04	
0.9000E+00		0.5438E+04	
0.1000E+01		0.5375E+04	
0.1100E+01		0.5338E+04	
0.1200E+01		0.5318E+04	
0.1300E+01		0.5298E+04	
0.1400E+01		0.5296E+04	
0.1500E+01		0.5200E+04	
0.1600E+01		0.5095E+04	
0.1700E+01		0.5017E+04	
0.1800E+01		0.4949E+04	
0.1900E+01		0.4908E+04	
0.2000E+01		0.4899E+04	
0.2100E+01		0.4897E+04	
0.2200E+01		0.4890E+04	
0.2300E+01		0.4850E+04	
0.2400E+01		0.4774E+04	
0.2500E+01		0.4684E+04	
0.2600E+01		0.4603E+04	
0.2700E+01		0.4559E+04	
0.2800E+01		0.4510E+04	
0.2900E+01		0.4513E+04	

TOTAL OF AZ= 0.1505E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 48
 REACTION HE-4 PRODUCT COSY Q-VALUE= 0.29 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
0.30	0.01	7.44	0.39	7.97	0.94	8.44	1.72	9.23	3.32
9.73	4.10	10.08	4.83	10.80	6.89	11.00	7.50	11.90	15.90
12.20	14.10	13.98	61.40	15.85	228.00	17.78	347.00	19.88	396.00
21.84	377.00	23.66	348.00	25.78	320.00	27.77	277.00	28.73	261.00
29.66	202.00	30.88	206.00	32.99	161.00	35.00	129.00	36.93	114.00
38.76	103.00	40.83	101.00	42.81	103.00	44.72	106.00	77.40	87.00
87.70	82.00	97.50	67.00	106.70	65.00	115.30	58.00	124.00	59.00
132.20	56.40	140.20	52.80	147.90	50.50	153.90	49.40	159.90	47.70
165.30	46.60	165.90	46.00	177.40	45.20	177.70	45.20	182.90	44.80
188.40	44.20	193.60	42.60	198.90	42.60				

THE TOTAL ACTIVATION IS 0.1798E+06 NUCLEI /DAY				FRACTIONAL ACTIVATION		PROTON FLUX PROTONS/DAY*CM**2	
PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY						
1	200.00	0.1768E+04		.009830915		10794.0	
2	195.00	0.1840E+04		.010231777		11143.3	
3	190.00	0.1925E+04		.010706531		11513.3	
4	185.00	0.2040E+04		.011346505		11906.1	
5	180.00	0.2174E+04		.012088913		12323.5	
6	175.00	0.2312E+04		.012855828		12768.0	
7	170.00	0.2461E+04		.013688652		13242.1	
8	165.00	0.2647E+04		.014723312		13748.7	
9	160.00	0.2870E+04		.015960157		14291.3	
10	155.00	0.3099E+04		.017235385		14873.5	
11	150.00	0.3282E+04		.018255631		15499.8	
12	145.00	0.3450E+04		.019185089		16175.0	
13	140.00	0.3755E+04		.020885896		16904.9	
14	135.00	0.4142E+04		.023033628		17696.1	
15	130.00	0.4543E+04		.025268933		18556.3	
16	125.00	0.5178E+04		.028798653		19494.7	
17	120.00	0.5960E+04		.033148620		20521.7	
18	115.00	0.6666E+04		.037074406		21650.2	
19	110.00	0.7315E+04		.040686071		22895.1	

20	105.00	0.8056E+04	.044804648	24274.7
21	100.00	0.8908E+04	.049541920	25811.0
22	95.00	0.9507E+04	.052872434	26475.5
23	90.00	0.1016E+05	.056492832	27194.4
24	85.00	0.1439E+05	.080052011	27975.7
25	80.00	0.1939E+05	.107852377	28829.0
26	75.00	0.1717E+05	.095512442	29765.9
27	70.00	0.1436E+05	.079878673	30801.2
28	65.00	0.8850E+04	.049220830	31953.4
29	60.00	0.1571E+04	.008738644	33246.3
30	55.00	0.5073E+01	.000028212	34711.2
31	50.00	0.2010E-02	.000000011	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	85539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
		NUCLEI/DAY
0.1000E+00	0.7724E+04	
0.2000E+00	0.7205E+04	
0.3000E+00	0.7098E+04	
0.4000E+00	0.7286E+04	
0.5000E+00	0.7258E+04	
0.6000E+00	0.7070E+04	
0.7000E+00	0.6597E+04	
0.8000E+00	0.6432E+04	
0.9000E+00	0.6490E+04	
0.1000E+01	0.6693E+04	
0.1100E+01	0.6713E+04	
0.1200E+01	0.6516E+04	
0.1300E+01	0.6073E+04	
0.1400E+01	0.5856E+04	
0.1500E+01	0.5942E+04	
0.1600E+01	0.6083E+04	
0.1700E+01	0.6120E+04	
0.1800E+01	0.6233E+04	
0.1900E+01	0.5995E+04	
0.2000E+01	0.5531E+04	
0.2100E+01	0.5366E+04	
0.2200E+01	0.5440E+04	
0.2300E+01	0.5577E+04	
0.2400E+01	0.5723E+04	
0.2500E+01	0.5690E+04	
0.2600E+01	0.5721E+04	
0.2700E+01	0.5412E+04	
0.2800E+01	0.4999E+04	
0.2900E+01	0.4960E+04	

TOTAL OF AZ= 0.1798E+06
 PHYLAIRD job terminated at 2-JUL-1991 21:18:47.57

Accounting information:
 Buffered I/O count: 97 Peak working set size: 447
 Direct I/O count: 180 Peak page file size: 2575
 Page faults: 767 Mounted volumes: 0
 Charged CPU time: 0 00:00:03.25 Elapsed time: 0 00:00:09.21

ENTER THE NAME OF THE DATA FILE BEING USED
PNID

THE TARGET IS NI
TM,C,AND A ARE 58.710 143.000 3.300
NCM= 10 NQM= 2 NMC= 3
THE COVERING MATERIAL IS ALUM
TC,CC, AND AC ARE 27.000 184.000 5.200
THICKNESS OF COVERING MATERIAL 2.57
THE INELASTIC XSECTIONS FOR COVERING
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
THE INELASTIC XSECTIONS OF THE TARGET
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
10.00 813.00 17.00 922.00 30.00 932.00 35.00 922.00 40.00 911.00
60.00 828.00 100.00 777.00 225.00 708.00 340.00 703.00 460.00 730.00
TARGET THICKNESS 2.826 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
INITIAL THETA 0.0 FINAL THETA 89.0 INCREMENT 11.0
INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
200.00 5.00 5.00 0.100 9
THE NUMBER OF REACTIONS EQUAL 9
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 25
REACTION 4PN PRODUCT MN54 Q-VALUE= 33.00 MEV
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
41.00 0.60 44.00 1.90 48.00 4.70 50.00 8.10 52.00 15.00
56.00 21.00 77.40 23.90 87.70 21.60 97.50 20.20 106.70 20.00
115.30 19.20 124.00 19.20 132.20 19.00 140.20 18.70 147.90 18.10
153.90 19.10 159.90 18.50 165.30 17.70 165.90 18.20 177.40 17.90
177.70 18.00 182.90 17.90 188.40 17.80 193.60 17.50 198.90 17.70

THE TOTAL ACTIVATION IS 0.3691E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.1091E+04	.029572653	10794.0
2 195.00	0.1133E+04	.030685274	11143.3
3 190.00	0.1178E+04	.031907108	11513.3
4 185.00	0.1230E+04	.033312555	11906.1
5 180.00	0.1290E+04	.034945834	12323.5
6 175.00	0.1335E+04	.036164969	12768.0
7 170.00	0.1383E+04	.037470695	13242.1
8 165.00	0.1456E+04	.039436862	13743.7
9 160.00	0.1533E+04	.041524384	14291.3
10 155.00	0.1616E+04	.043778695	14873.5
11 150.00	0.1704E+04	.046169560	15499.8
12 145.00	0.1799E+04	.048732907	16175.0
13 140.00	0.1898E+04	.051417779	16904.9
14 135.00	0.1968E+04	.053313699	17696.1
15 130.00	0.2038E+04	.055203844	18556.3
16 125.00	0.2124E+04	.057536721	19494.7
17 120.00	0.2227E+04	.060336500	20521.7
18 115.00	0.2280E+04	.061760612	21650.2
19 110.00	0.2258E+04	.061177108	22895.1
20 105.00	0.1818E+04	.049269315	24274.7
21 100.00	0.1593E+04	.043155659	25811.0
22 95.00	0.1123E+04	.030426269	26475.5
23 90.00	0.6251E+03	.016936447	27194.4
24 85.00	0.1840E+03	.004984019	27975.7
25 80.00	0.2723E+02	.000737776	28829.0
26 75.00	0.1571E+01	.000042557	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0

39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
0.1000E+00		0.1284E+04		
0.2000E+00		0.1389E+04		
0.3000E+00		0.1687E+04		
0.4000E+00		0.1248E+04		
0.5000E+00		0.1541E+04		
0.6000E+00		0.1563E+04		
0.7000E+00		0.1509E+04		
0.8000E+00		0.1313E+04		
0.9000E+00		0.1479E+04		
0.1000E+01		0.1284E+04		
0.1100E+01		0.1578E+04		
0.1200E+01		0.1221E+04		
0.1300E+01		0.1433E+04		
0.1400E+01		0.1365E+04		
0.1500E+01		0.1177E+04		
0.1600E+01		0.1423E+04		
0.1700E+01		0.1138E+04		
0.1800E+01		0.1361E+04		
0.1900E+01		0.1098E+04		
0.2000E+01		0.1070E+04		
0.2100E+01		0.1310E+04		
0.2200E+01		0.1119E+04		
0.2300E+01		0.1076E+04		
0.2400E+01		0.1087E+04		
0.2500E+01		0.1041E+04		
0.2600E+01		0.1250E+04		
0.2700E+01		0.1073E+04		
0.2800E+01		0.8625E+03		
0.2900E+01		0.9285E+03		

TOTAL OF AZ= 0.3691E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 55									
REACTION 2PN PRODUCT C058 Q-VALUE= 0.39 MEV									
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
0.30	0.01	11.90	1.52	13.98	1.78	15.85	1.81	17.78	1.78
19.88	2.50	21.84	3.80	23.66	4.16	25.78	5.14	27.77	10.00
28.73	16.00	29.66	21.90	30.88	32.40	32.99	50.00	35.00	62.00
36.93	68.80	38.76	75.80	40.83	72.60	42.81	63.90	44.72	62.80
46.50	68.30	48.00	66.90	50.50	65.40	56.00	54.10	57.00	52.60
60.50	49.80	62.50	49.80	63.50	51.20	66.50	44.10	67.00	49.80
69.00	51.20	71.00	46.95	73.00	42.70	76.00	44.10	77.40	33.90
77.50	44.10	78.50	41.30	87.70	31.50	97.50	29.10	106.70	27.50
115.30	26.20	124.00	25.30	132.20	24.60	140.20	23.80	147.90	22.70
153.90	23.10	159.90	23.10	165.30	19.70	165.90	22.70	177.40	22.00
177.70	22.50	182.90	21.80	188.40	21.30	193.60	20.40	198.90	19.60

THE TOTAL ACTIVATION IS 0.7882E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	0.1344E+04	.017047685	10794.0
2	0.1394E+04	.017688923	11143.3
3	0.1441E+04	.018286142	11513.3
4	0.1504E+04	.019087100	11906.1
5	0.1608E+04	.020400710	12323.5
6	0.1681E+04	.021323264	12768.0
7	0.1773E+04	.022495143	13242.1
8	0.1893E+04	.024013977	13748.7
9	0.2022E+04	.025655563	14291.3
10	0.2176E+04	.027606588	14873.5
11	0.2361E+04	.029953036	15499.8
12	0.2579E+04	.032717273	16175.0
13	0.2849E+04	.036146194	16904.9
14	0.3195E+04	.040531918	17696.1
15	0.3507E+04	.044494066	18556.3
16	0.3793E+04	.048122510	19494.7

17	120.00	0.4198E+04	.053261545	20521.7
18	115.00	0.4731E+04	.060025226	21650.2
19	110.00	0.5366E+04	.068086423	22895.1
20	105.00	0.4645E+04	.058934845	24274.7
21	100.00	0.5172E+04	.065615982	25811.0
22	95.00	0.5329E+04	.067608222	26475.5
23	90.00	0.5218E+04	.066210642	27194.4
24	85.00	0.4309E+04	.054673605	27975.7
25	80.00	0.2969E+04	.037672862	28829.0
26	75.00	0.1361E+04	.017267328	29765.9
27	70.00	0.3252E+03	.004126241	30801.2
28	65.00	0.5952E+02	.000755135	31953.4
29	60.00	0.1439E+02	.000182583	33246.3
30	55.00	0.7061E+00	.000008959	34711.2
31	50.00	0.1087E-02	.000000014	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00		0.2557E+04	
0.2000E+00		0.2825E+04	
0.3000E+00		0.3426E+04	
0.4000E+00		0.2531E+04	
0.5000E+00		0.3139E+04	
0.6000E+00		0.3293E+04	
0.7000E+00		0.3093E+04	
0.8000E+00		0.2708E+04	
0.9000E+00		0.3040E+04	
0.1000E+01		0.2665E+04	
0.1100E+01		0.3337E+04	
0.1200E+01		0.2537E+04	
0.1300E+01		0.3103E+04	
0.1400E+01		0.2964E+04	
0.1500E+01		0.2608E+04	
0.1600E+01		0.3146E+04	
0.1700E+01		0.2509E+04	
0.1800E+01		0.3009E+04	
0.1900E+01		0.2426E+04	
0.2000E+01		0.2362E+04	
0.2100E+01		0.2904E+04	
0.2200E+01		0.2468E+04	
0.2300E+01		0.2384E+04	
0.2400E+01		0.2413E+04	
0.2500E+01		0.2297E+04	
0.2600E+01		0.2774E+04	
0.2700E+01		0.2360E+04	
0.2800E+01		0.1892E+04	
0.2900E+01		0.2047E+04	

TOTAL OF AZ= 0.7882E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 32		Q-VALUE= 9.90 MEV	
REACTION	2P	PRODUCT	CO60
MEV	MBS	MEV	MBS
9.80	0.01	23.66	0.70
29.66	0.75	30.88	0.92
38.76	1.81	40.83	2.02
97.50	1.91	106.70	1.64
140.20	1.74	147.90	1.54
165.90	1.79	177.40	1.69
193.60	1.71	198.90	1.64

THE TOTAL ACTIVATION IS	0.3753E+04 NUCLEI /DAY	
PROTON	PARTIAL	FRACTIONAL
		PROTON

ENERGY MEV	ACTIVATION NUCLEI PER DAY	ACTIVATION	FLUX PROTONS/DAY*CM**2
1 200.00	0.1016E+03	.027072227	10794.0
2 195.00	0.1058E+03	.028195364	11143.3
3 190.00	0.1071E+03	.028536661	11513.3
4 185.00	0.1089E+03	.029028310	11906.1
5 180.00	0.1153E+03	.030730920	12323.5
6 175.00	0.1165E+03	.031047868	12768.0
7 170.00	0.1210E+03	.032231916	13242.1
8 165.00	0.1231E+03	.034135696	13748.7
9 160.00	0.1321E+03	.035198960	14291.3
10 155.00	0.1367E+03	.036435071	14873.5
11 150.00	0.1435E+03	.038232673	15499.8
12 145.00	0.1507E+03	.040155008	16175.0
13 140.00	0.1606E+03	.042798981	16904.9
14 135.00	0.1747E+03	.046544265	17696.1
15 130.00	0.1870E+03	.049812496	18556.3
16 125.00	0.1936E+03	.051582020	19494.7
17 120.00	0.1971E+03	.052508444	20521.7
18 115.00	0.2028E+03	.054021016	21650.2
19 110.00	0.2098E+03	.055900611	22895.1
20 105.00	0.1742E+03	.046404865	24274.7
21 100.00	0.1787E+03	.047608800	25811.0
22 95.00	0.1725E+03	.045949813	26475.5
23 90.00	0.1557E+03	.041476730	27194.4
24 85.00	0.1260E+03	.033578817	27975.7
25 80.00	0.8750E+02	.023312956	28829.0
26 75.00	0.4091E+02	.010900141	29765.9
27 70.00	0.1881E+02	.005011206	30801.2
28 65.00	0.5604E+01	.001493132	31953.4
29 60.00	0.3564E+00	.000094952	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86533.0
40 5.00	0.0000E+00	.000000000	111493.4
DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY		
0.1000E+00	0.1281E+03		
0.2000E+00	0.1394E+03		
0.3000E+00	0.1685E+03		
0.4000E+00	0.1243E+03		
0.5000E+00	0.1533E+03		
0.6000E+00	0.1578E+03		
0.7000E+00	0.1503E+03		
0.8000E+00	0.1316E+03		
0.9000E+00	0.1472E+03		
0.1000E+01	0.1282E+03		
0.1100E+01	0.1596E+03		
0.1200E+01	0.1218E+03		
0.1300E+01	0.1464E+03		
0.1400E+01	0.1392E+03		
0.1500E+01	0.1215E+03		
0.1600E+01	0.1467E+03		
0.1700E+01	0.1176E+03		
0.1800E+01	0.1414E+03		
0.1900E+01	0.1136E+03		
0.2000E+01	0.1108E+03		
0.2100E+01	0.1355E+03		
0.2200E+01	0.1155E+03		
0.2300E+01	0.1116E+03		
0.2400E+01	0.1118E+03		

0.2500E+01 0.1068E+03
 0.2600E+01 0.1299E+03
 0.2700E+01 0.1107E+03
 0.2800E+01 0.8894E+02
 0.2900E+01 0.9542E+02
 TOTAL OF AZ= 0.3753E+04
 THE NUMBER OF CROSS SECTION DATA POINTS IS 25
 REACTION 4P3N PRODUCT MN52 Q-VALUE= 38.77 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS
 38.76 0.18 40.83 0.41 42.81 0.99 44.72 2.40 50.00 4.20
 56.00 8.40 77.40 13.90 87.70 13.60 97.50 15.10 106.70 16.00
 115.30 15.90 124.00 16.10 132.20 16.10 140.20 16.20 147.90 15.90
 153.90 16.40 159.90 16.20 165.30 15.90 165.90 16.00 177.40 15.70
 177.70 16.00 182.90 15.60 188.40 15.70 193.60 15.70 198.90 15.80

THE TOTAL ACTIVATION IS 0.2598E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.9590E+03	.036910996	10794.0
2 195.00	0.9935E+03	.038241796	11143.3
3 190.00	0.1033E+04	.039759360	11513.3
4 185.00	0.1074E+04	.041346204	11906.1
5 180.00	0.1116E+04	.042950884	12323.5
6 175.00	0.1151E+04	.044302847	12768.0
7 170.00	0.1188E+04	.045736924	13242.1
8 165.00	0.1234E+04	.047489826	13748.7
9 160.00	0.1275E+04	.049079500	14291.3
10 155.00	0.1317E+04	.050707735	14873.5
11 150.00	0.1358E+04	.052277412	15499.8
12 145.00	0.1392E+04	.053579543	16175.0
13 140.00	0.1416E+04	.054487109	16904.9
14 135.00	0.1417E+04	.054530501	17696.1
15 130.00	0.1394E+04	.053636767	18556.3
16 125.00	0.1359E+04	.052290779	19494.7
17 120.00	0.1324E+04	.050976198	20521.7
18 115.00	0.1276E+04	.049111899	21650.2
19 110.00	0.1186E+04	.045638572	22895.1
20 105.00	0.8872E+03	.034147549	24274.7
21 100.00	0.7216E+03	.027775943	25811.0
22 95.00	0.4990E+03	.019207429	26475.5
23 90.00	0.2796E+03	.010760746	27194.4
24 85.00	0.1078E+03	.004149120	27975.7
25 80.00	0.2311E+02	.000889435	28829.0
26 75.00	0.3888E+00	.000014966	29765.9
27 70.00	0.0000E+00	.000000000	30801.2
28 65.00	0.0000E+00	.000000000	31953.4
29 60.00	0.0000E+00	.000000000	33246.3
30 55.00	0.0000E+00	.000000000	34711.2
31 50.00	0.0000E+00	.000000000	36390.0
32 45.00	0.0000E+00	.000000000	37815.7
33 40.00	0.0000E+00	.000000000	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH ACTIVATION
 GRAMS/SQ CM NUCLEI/DAY
 0.1000E+00 0.9252E+03
 0.2000E+00 0.9980E+03
 0.3000E+00 0.1211E+04
 0.4000E+00 0.8942E+03
 0.5000E+00 0.1101E+04
 0.6000E+00 0.1108E+04
 0.7000E+00 0.1071E+04
 0.8000E+00 0.9265E+03

0.9000E+00	0.1041E+04
0.1000E+01	0.8999E+03
0.1100E+01	0.1103E+04
0.1200E+01	0.8538E+03
0.1300E+01	0.1004E+04
0.1400E+01	0.9557E+03
0.1500E+01	0.8246E+03
0.1600E+01	0.9947E+03
0.1700E+01	0.7946E+03
0.1800E+01	0.9530E+03
0.1900E+01	0.7675E+03
0.2000E+01	0.7477E+03
0.2100E+01	0.9163E+03
0.2200E+01	0.7819E+03
0.2300E+01	0.7523E+03
0.2400E+01	0.7608E+03
0.2500E+01	0.7251E+03
0.2600E+01	0.8735E+03
0.2700E+01	0.7487E+03
0.2800E+01	0.5994E+03
0.2900E+01	0.6473E+03

TOTAL OF AZ= 0.2598E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 45

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
14.10	0.01	17.78	0.01	19.88	0.26	21.84	0.53	23.66	0.74				
25.78	0.97	27.77	1.59	28.73	2.08	29.66	3.04	30.88	3.98				
32.99	5.91	35.00	7.70	36.93	9.24	38.76	10.40	40.83	11.10				
42.81	11.00	44.72	10.30	47.00	12.00	50.00	10.60	54.00	9.70				
57.50	9.70	61.00	8.70	63.50	9.20	69.00	8.50	73.00	8.30				
77.40	5.94	87.70	5.32	97.50	4.90	106.70	4.58	115.30	4.24				
124.00	4.14	132.20	3.96	140.20	3.90	147.90	3.69	153.90	3.75				
159.90	3.55	165.30	3.49	165.90	3.50	177.40	3.31	177.70	3.36				
182.90	3.24	188.40	3.25	193.60	3.16	198.90	3.12	400.00	3.50				

THE TOTAL ACTIVATION IS 0.1281E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.2057E+03	.016060185
2	195.00	0.2170E+03	.016943734
3	190.00	0.2296E+03	.017925769
4	185.00	0.2430E+03	.018967539
5	180.00	0.2580E+03	.020142056
6	175.00	0.2731E+03	.021319469
7	170.00	0.2891E+03	.022567937
8	165.00	0.3089E+03	.024116542
9	160.00	0.3297E+03	.025738111
10	155.00	0.3538E+03	.027616898
11	150.00	0.3863E+03	.030159218
12	145.00	0.4257E+03	.033228517
13	140.00	0.4738E+03	.036987066
14	135.00	0.5323E+03	.041553851
15	130.00	0.5822E+03	.045448661
16	125.00	0.6274E+03	.048981335
17	120.00	0.6879E+03	.053698141
18	115.00	0.7792E+03	.060829505
19	110.00	0.8945E+03	.069829941
20	105.00	0.8077E+03	.063054316
21	100.00	0.8857E+03	.069145657
22	95.00	0.8895E+03	.069438428
23	90.00	0.8273E+03	.064585283
24	85.00	0.6542E+03	.051072266
25	80.00	0.4255E+03	.033219036
26	75.00	0.1749E+03	.013656394
27	70.00	0.4185E+02	.003267226
28	65.00	0.5679E+01	.000443310
29	60.00	0.4538E-01	.000003543
30	55.00	0.0000E+00	.000000000

31	50.00	0.0000E+00	.0000000000	36390.0
32	45.00	0.0000E+00	.0000000000	37815.7
33	40.00	0.0000E+00	.0000000000	39475.7
34	35.00	0.0000E+00	.0000000000	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.4141E+03
0.2000E+00	0.4565E+03
0.3000E+00	0.5552E+03
0.4000E+00	0.4109E+03
0.5000E+00	0.5100E+03
0.6000E+00	0.5329E+03
0.7000E+00	0.5043E+03
0.8000E+00	0.4413E+03
0.9000E+00	0.4953E+03
0.1000E+01	0.4351E+03
0.1100E+01	0.5430E+03
0.1200E+01	0.4149E+03
0.1300E+01	0.5064E+03
0.1400E+01	0.4821E+03
0.1500E+01	0.4234E+03
0.1600E+01	0.5096E+03
0.1700E+01	0.4080E+03
0.1800E+01	0.4916E+03
0.1900E+01	0.3932E+03
0.2000E+01	0.3824E+03
0.2100E+01	0.4724E+03
0.2200E+01	0.4012E+03
0.2300E+01	0.3877E+03
0.2400E+01	0.3918E+03
0.2500E+01	0.3728E+03
0.2600E+01	0.4489E+03
0.2700E+01	0.3848E+03
0.2800E+01	0.3079E+03
0.2900E+01	0.3321E+03

TOTAL OF AZ= 0.1281E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 46									
REACTION		P.P.N		PRODUCT		NI57		Q-VALUE= 9.98 MEV	
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
9.97	0.01	11.90	0.02	13.98	0.62	15.85	15.10	17.78	61.80
19.88	116.00	21.84	140.00	23.66	159.00	25.78	171.00	27.77	174.00
28.73	167.00	29.66	155.00	30.88	142.00	32.99	118.00	35.00	103.00
36.93	94.60	38.76	87.40	40.83	84.40	42.81	81.40	44.72	79.70
47.00	82.50	54.00	79.50	57.00	82.50	62.50	75.00	66.50	72.00
71.00	73.50	75.50	69.00	77.40	56.40	87.70	50.90	97.50	46.00
106.70	42.80	115.30	40.50	124.00	38.70	132.20	37.60	140.20	36.30
147.90	35.00	153.90	34.50	159.90	33.30	165.30	32.30	165.90	32.70
177.40	31.10	177.70	32.10	182.90	30.40	188.40	30.00	193.60	19.50
198.90	29.30								

THE TOTAL ACTIVATION IS 0.1377E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	0.1934E+04	.014041546	10794.0
2	0.2031E+04	.014747148	11143.3
3	0.2145E+04	.015574240	11513.3
4	0.2268E+04	.016468199	11906.1
5	0.2410E+04	.017501956	12323.5
6	0.2559E+04	.018583048	12768.0
7	0.2719E+04	.019743806	13242.1
8	0.2903E+04	.021079386	13748.7
9	0.3108E+04	.022570016	14291.3

10	155.00	0.3339E+04	.024243267	14873.5
11	150.00	0.3636E+04	.026405806	15499.8
12	145.00	0.3986E+04	.028944965	16175.0
13	140.00	0.4400E+04	.031949531	16904.9
14	135.00	0.4874E+04	.035390619	17696.1
15	130.00	0.5599E+04	.040656697	18556.3
16	125.00	0.6155E+04	.044697639	19494.7
17	120.00	0.6706E+04	.048695643	20521.7
18	115.00	0.7436E+04	.053996991	21650.2
19	110.00	0.8307E+04	.060321935	22895.1
20	105.00	0.7329E+04	.053220134	24274.7
21	100.00	0.7914E+04	.057466868	25811.0
22	95.00	0.8346E+04	.060603715	26475.5
23	90.00	0.8678E+04	.063012958	27194.4
24	85.00	0.9134E+04	.066323593	27975.7
25	80.00	0.8169E+04	.059317283	28829.0
26	75.00	0.5714E+04	.041489482	29765.9
27	70.00	0.4121E+04	.029921597	30801.2
28	65.00	0.1737E+04	.012612195	31953.4
29	60.00	0.5777E+02	.000419512	33246.3
30	55.00	0.0000E+00	.000000000	34711.2
31	50.00	0.0000E+00	.000000000	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
		NUCLEI/DAY
0.1000E+00		0.4395E+04
0.2000E+00		0.4886E+04
0.3000E+00		0.5915E+04
0.4000E+00		0.4380E+04
0.5000E+00		0.5310E+04
0.6000E+00		0.5670E+04
0.7000E+00		0.5275E+04
0.8000E+00		0.4747E+04
0.9000E+00		0.5324E+04
0.1000E+01		0.4727E+04
0.1100E+01		0.5866E+04
0.1200E+01		0.4336E+04
0.1300E+01		0.5372E+04
0.1400E+01		0.5067E+04
0.1500E+01		0.4447E+04
0.1600E+01		0.5427E+04
0.1700E+01		0.4450E+04
0.1800E+01		0.5397E+04
0.1900E+01		0.4290E+04
0.2000E+01		0.4180E+04
0.2100E+01		0.5179E+04
0.2200E+01		0.4344E+04
0.2300E+01		0.4267E+04
0.2400E+01		0.4320E+04
0.2500E+01		0.4057E+04
0.2600E+01		0.4884E+04
0.2700E+01		0.4156E+04
0.2800E+01		0.3372E+04
0.2900E+01		0.3671E+04

TOTAL OF AZ= 0.1377E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48									
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
1.35	0.01	7.44	0.07	7.97	0.27	8.44	0.80	9.23	2.87
9.73	4.50	10.08	6.33	10.80	10.70	11.00	11.60	11.90	14.50

12.20	14.30	13.98	22.60	15.85	28.00	17.78	27.30	19.88	21.20
21.84	12.20	23.66	7.54	25.78	4.18	27.77	3.07	28.73	3.11
29.66	2.60	30.88	2.70	32.99	2.52	35.00	3.52	36.93	4.70
38.76	5.74	40.83	9.24	42.81	13.50	44.72	19.50	77.40	32.60
87.70	30.60	97.50	27.00	106.70	24.60	115.30	23.90	124.00	23.30
132.20	22.40	140.20	20.70	147.90	20.80	153.90	22.30	159.90	20.60
165.30	20.40	165.90	21.20	177.40	18.80	177.70	20.90	182.90	18.00
188.40	19.60	193.60	17.60	198.90	19.00				

THE TOTAL ACTIVATION IS 0.5122E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.1200E+04	.023432381
2	195.00	0.1262E+04	.024634516
3	190.00	0.1341E+04	.026179966
4	185.00	0.1406E+04	.027454492
5	180.00	0.1482E+04	.028941402
6	175.00	0.1546E+04	.030182857
7	170.00	0.1597E+04	.031186659
8	165.00	0.1698E+04	.033142015
9	160.00	0.1835E+04	.035834134
10	155.00	0.1984E+04	.038739242
11	150.00	0.2126E+04	.041507497
12	145.00	0.2266E+04	.044245604
13	140.00	0.2418E+04	.047216896
14	135.00	0.2586E+04	.050485998
15	130.00	0.2756E+04	.053800698
16	125.00	0.2965E+04	.057889391
17	120.00	0.3113E+04	.060785905
18	115.00	0.3182E+04	.062121037
19	110.00	0.3096E+04	.060438167
20	105.00	0.2397E+04	.046788927
21	100.00	0.2221E+04	.043354057
22	95.00	0.1875E+04	.036603067
23	90.00	0.1449E+04	.028283760
24	85.00	0.1069E+04	.020876247
25	80.00	0.8275E+03	.016155891
26	75.00	0.4933E+03	.009630769
27	70.00	0.4445E+03	.008678735
28	65.00	0.4097E+03	.007999362
29	60.00	0.1740E+03	.003396184
30	55.00	0.7219E+00	.000014094
31	50.00	0.0000E+00	.000000000
32	45.00	0.0000E+00	.000000000
33	40.00	0.0000E+00	.000000000
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1751E+04
0.2000E+00	0.1905E+04
0.3000E+00	0.2311E+04
0.4000E+00	0.1711E+04
0.5000E+00	0.2101E+04
0.6000E+00	0.2161E+04
0.7000E+00	0.2057E+04
0.8000E+00	0.1796E+04
0.9000E+00	0.2007E+04
0.1000E+01	0.1755E+04
0.1100E+01	0.2202E+04
0.1200E+01	0.1682E+04
0.1300E+01	0.1993E+04
0.1400E+01	0.1890E+04

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
11.70	0.01	15.85	0.01	17.78	0.02	19.88	0.76	21.84	4.81				
23.66	9.30	25.78	15.80	27.77	34.00	28.73	47.80	29.66	67.70				
30.88	91.60	32.99	142.00	35.00	172.00	36.93	194.00	38.76	198.00				
40.83	211.00	42.81	197.00	44.72	177.00	48.00	186.00	54.00	138.00				
57.00	128.00	62.50	124.00	67.00	116.00	71.00	118.00	77.40	84.10				
87.70	74.00	97.50	65.90	106.70	60.90	115.30	57.10	124.00	54.80				
132.20	52.50	140.20	50.90	147.90	48.50	153.90	47.80	159.90	45.90				
165.30	45.20	165.90	44.40	177.40	42.50	177.70	43.50	182.90	41.80				
188.40	41.50	193.60	40.40	198.90	40.20								

TOTAL OF AZ= 0.5122E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43

REACTION HE3 PRODUCT C056 Q-VALUE= 1.84 MEV

THE TOTAL ACTIVATION IS 0.1880E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	0.2647E+04	.014078462	10794.0
2	0.2785E+04	.014814154	11143.3
3	0.2956E+04	.015719675	11513.3
4	0.3145E+04	.016728260	11906.1
5	0.3347E+04	.017801592	12323.5
6	0.3565E+04	.018959152	12768.0
7	0.3802E+04	.020222878	13242.1
8	0.4076E+04	.021679973	13748.7
9	0.4377E+04	.023281656	14291.3
10	0.4725E+04	.025128145	14873.5
11	0.5177E+04	.027533861	15499.8
12	0.5727E+04	.030458169	16175.0
13	0.6407E+04	.034077343	16904.9
14	0.7335E+04	.039013542	17696.1
15	0.8178E+04	.043497730	18556.3
16	0.8869E+04	.047170263	19494.7
17	0.9770E+04	.051960707	20521.7
18	0.1109E+05	.058990937	21650.2
19	0.1284E+05	.068285450	22895.1
20	0.1146E+05	.060960576	24274.7
21	0.1305E+05	.069383495	25811.0
22	0.1389E+05	.073867284	26475.5
23	0.1395E+05	.074182540	27194.4
24	0.1189E+05	.063224316	27975.7
25	0.8339E+04	.044351827	28829.0
26	0.3723E+04	.019801106	29765.9
27	0.8516E+03	.004529320	30801.2
28	0.5572E+02	.000296366	31953.4
29	0.1640E+00	.000000872	33246.3
30	0.5679E-01	.000000302	34711.2
31	0.0000E+00	.000000000	36390.0
32	0.0000E+00	.000000000	37815.7
33	0.0000E+00	.000000000	39475.7
34	0.0000E+00	.000000000	41445.9
35	0.0000E+00	.000000000	43843.0
36	0.0000E+00	.000000000	47588.0

37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.5990E+04
0.2000E+00	0.6635E+04
0.3000E+00	0.8084E+04
0.4000E+00	0.5987E+04
0.5000E+00	0.7449E+04
0.6000E+00	0.7825E+04
0.7000E+00	0.7317E+04
0.8000E+00	0.6425E+04
0.9000E+00	0.7213E+04
0.1000E+01	0.6329E+04
0.1100E+01	0.7954E+04
0.1200E+01	0.6029E+04
0.1300E+01	0.7432E+04
0.1400E+01	0.7088E+04
0.1500E+01	0.6215E+04
0.1600E+01	0.7539E+04
0.1700E+01	0.6042E+04
0.1800E+01	0.7245E+04
0.1900E+01	0.5825E+04
0.2000E+01	0.5670E+04
0.2100E+01	0.6974E+04
0.2200E+01	0.5950E+04
0.2300E+01	0.5733E+04
0.2400E+01	0.5787E+04
0.2500E+01	0.5513E+04
0.2600E+01	0.6626E+04
0.2700E+01	0.5669E+04
0.2800E+01	0.4549E+04
0.2900E+01	0.4927E+04

TOTAL OF AZ= 0.1880E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48

MEV	MBS	HE-4	PRODUCT	CO57	Q-VALUE= 0.29 MEV
0.30	0.01	7.44	0.39	7.97	0.94
9.73	4.10	10.08	4.83	10.80	6.89
12.20	14.10	13.98	61.40	15.85	228.00
21.84	377.00	23.66	348.00	25.78	320.00
29.66	202.00	30.88	206.00	32.99	161.00
38.76	103.00	40.83	101.00	42.81	103.00
87.70	82.00	97.50	67.00	106.70	65.00
132.20	56.40	140.20	52.80	147.90	50.50
165.30	46.60	165.90	46.00	177.40	45.20
188.40	44.20	193.60	42.60	198.90	42.60

THE TOTAL ACTIVATION IS 0.2131E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	200.00	0.2779E+04	.013043865
2	195.00	0.2914E+04	.013674633
3	190.00	0.3076E+04	.014434122
4	185.00	0.3271E+04	.015351158
5	180.00	0.3484E+04	.016349416
6	175.00	0.3716E+04	.017439984
7	170.00	0.3980E+04	.018675977
8	165.00	0.4285E+04	.020109320
9	160.00	0.4641E+04	.021779910
10	155.00	0.5022E+04	.023566108
11	150.00	0.5400E+04	.025339995
12	145.00	0.5829E+04	.027355647
13	140.00	0.6406E+04	.030064208
14	135.00	0.7107E+04	.033354498
15	130.00	0.8172E+04	.038348466

16	125.00	0.9306E+04	.043674517	10494.7
17	120.00	0.1008E+05	.047293130	20521.7
18	115.00	0.1078E+05	.050589163	21650.2
19	110.00	0.1146E+05	.053763006	22895.1
20	105.00	0.9519E+04	.044673074	21274.7
21	100.00	0.1053E+05	.049414810	25811.0
22	95.00	0.1140E+05	.053507563	26475.5
23	90.00	0.1244E+05	.058358461	27194.4
24	85.00	0.1461E+05	.068562500	27975.7
25	80.00	0.1509E+05	.070817731	28829.0
26	75.00	0.1145E+05	.053728908	29765.9
27	70.00	0.9575E+04	.044934411	30801.2
28	65.00	0.5900E+04	.027688362	31953.4
29	60.00	0.8729E+03	.004096481	33246.3
30	55.00	0.2255E+01	.000010580	34711.2
31	50.00	0.6700E-03	.000000003	36390.0
32	45.00	0.0000E+00	.000000000	37815.7
33	40.00	0.0000E+00	.000000000	39475.7
34	35.00	0.0000E+00	.000000000	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
	0.1000E+00	0.6963E+04		
	0.2000E+00	0.7483E+04		
	0.3000E+00	0.9052E+04		
	0.4000E+00	0.6812E+04		
	0.5000E+00	0.8212E+04		
	0.6000E+00	0.8840E+04		
	0.7000E+00	0.7994E+04		
	0.8000E+00	0.7221E+04		
	0.9000E+00	0.8078E+04		
	0.1000E+01	0.7373E+04		
	0.1100E+01	0.9297E+04		
	0.1200E+01	0.6641E+04		
	0.1300E+01	0.8193E+04		
	0.1400E+01	0.7778E+04		
	0.1500E+01	0.6815E+04		
	0.1600E+01	0.8260E+04		
	0.1700E+01	0.6801E+04		
	0.1800E+01	0.8501E+04		
	0.1900E+01	0.6873E+04		
	0.2000E+01	0.6377E+04		
	0.2100E+01	0.8049E+04		
	0.2200E+01	0.6775E+04		
	0.2300E+01	0.6501E+04		
	0.2400E+01	0.6877E+04		
	0.2500E+01	0.6458E+04		
	0.2600E+01	0.7692E+04		
	0.2700E+01	0.6420E+04		
	0.2800E+01	0.5054E+04		
	0.2900E+01	0.5696E+04		

\$run ptrap4

ENTER THE NAME OF THE DATA FILE BEING USED

pnid

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THE TARGET IS NI
TM,C,AND A ARE 58.710 148.000 3.300
NCM= 10 NQM= 2 NMC= 2
THE COVERING MATERIAL IS ALUM
TC,CC, AND AC ARE 27.000 184.000 5.200
THICKNESS OF COVERING MATERIAL 2.57
THE INELASTIC XSECTIONS FOR COVERING
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
NO COVERING MATERIAL
THE INELASTIC XSECTIONS OF THE TARGET
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
10.00 813.00 17.00 922.00 30.00 932.00 35.00 922.00 40.00 911.00
60.00 828.00 100.00 777.00 225.00 708.00 340.00 703.00 460.00 730.00
TARGET THICKNESS 2.826 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
INITIAL THETA 0.0 FINAL THETA 0.0 INCREMENT 11.0
INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
200.00 5.00 5.00 0.100 9
THE NUMBER OF REACTIONS EQUAL 9
THE NUMBER OF PROTON FLUX DATA POINTS IS 15
MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6
THE NUMBER OF CROSS SECTION DATA POINTS IS 25
REACTION 4PN PRODUCT MW54 Q-VALUE= 33.00 MEV
MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
41.00 0.60 44.00 1.90 48.00 4.70 50.00 8.10 52.00 15.00
56.00 21.00 77.40 23.90 87.70 21.60 97.50 20.20 106.70 20.00
115.30 19.20 124.00 19.20 132.20 19.00 140.20 18.70 147.90 18.10
153.90 18.10 159.90 18.50 165.30 17.70 165.90 18.20 177.40 17.90
177.70 18.00 182.90 17.90 188.30 17.80 193.60 17.50 198.90 17.70
THE TOTAL ACTIVATION IS 0.4331E+05 NUCLBI /DAY
PROTON ENERGY MEV PARTIAL ACTIVATION FRACTIONAL ACTIVATION PROTON FLUX
NUCLBI PER DAY
1 200.00 0.7216E+03 .016662043 10794.0
2 195.00 0.7473E+03 .017254896 11143.3
3 190.00 0.7799E+03 .018008463 11513.3
4 185.00 0.8104E+03 .018712433 11906.1
5 180.00 0.8412E+03 .019422576 12323.5
6 175.00 0.8764E+03 .020234611 12768.0
7 170.00 0.9089E+03 .020984987 13242.1
8 165.00 0.9599E+03 .022162715 13748.7
9 160.00 0.1019E+04 .023537790 14291.3
10 155.00 0.1047E+04 .024167649 14873.5
11 150.00 0.1082E+04 .024971386 15499.8
12 145.00 0.1114E+04 .026462846 16175.0
13 140.00 0.1213E+04 .028001733 16904.9
14 135.00 0.1280E+04 .029557044 17696.1
15 130.00 0.1349E+04 .031154517 18556.3
16 125.00 0.1422E+04 .032824133 19494.7
17 120.00 0.1511E+04 .034899242 20521.7
18 115.00 0.1623E+04 .037470914 21650.2
19 110.00 0.1741E+04 .040194836 22895.1
20 105.00 0.1874E+04 .043259483 24274.7
21 100.00 0.2044E+04 .047193512 25811.0
22 95.00 0.2183E+04 .050397772 26475.5
23 90.00 0.2340E+04 .054031212 27194.4
24 85.00 0.2456E+04 .056716528 27975.7
25 80.00 0.2515E+04 .058065798 28829.0
26 75.00 0.2520E+04 .058195688 29765.9
27 70.00 0.2376E+04 .054864280 30801.2
28 65.00 0.1857E+04 .042876918 31953.4
29 60.00 0.1236E+04 .028540211 33246.3
30 55.00 0.6122E+03 .014134818 34711.2
31 50.00 0.1728E+03 .003990948 36390.0
32 45.00 0.3948E+02 .000911461 37815.7
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33	40.00	0.5459E+01	.000126045	39475.7
34	35.00	0.4496E+00	.000010381	41445.9
35	30.00	0.0000E+00	.000000000	43843.0
36	25.00	0.0000E+00	.000000000	47588.0
37	20.00	0.0000E+00	.000000000	52609.5
38	15.00	0.0000E+00	.000000000	59873.0
39	10.00	0.0000E+00	.000000000	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
		NUCLEI/DAY
0.1000E+00		0.1689E+04
0.2000E+00		0.1674E+04
0.3000E+00		0.1660E+04
0.4000E+00		0.1648E+04
0.5000E+00		0.1633E+04
0.6000E+00		0.1615E+04
0.7000E+00		0.1597E+04
0.8000E+00		0.1581E+04
0.9000E+00		0.1566E+04
0.1000E+01		0.1554E+04
0.1100E+01		0.1544E+04
0.1200E+01		0.1531E+04
0.1300E+01		0.1515E+04
0.1400E+01		0.1500E+04
0.1500E+01		0.1484E+04
0.1600E+01		0.1470E+04
0.1700E+01		0.1458E+04
0.1800E+01		0.1449E+04
0.1900E+01		0.1440E+04
0.2000E+01		0.1425E+04
0.2100E+01		0.1411E+04
0.2200E+01		0.1398E+04
0.2300E+01		0.1384E+04
0.2400E+01		0.1373E+04
0.2500E+01		0.1363E+04
0.2600E+01		0.1354E+04
0.2700E+01		0.1346E+04
0.2800E+01		0.1331E+04
0.2900E+01		0.1318E+04

TOTAL OF AZ= 0.4331E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 55									
REACTION		2PN		PRODUCT		C058		Q-VALUE= 0.39 MEV	
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
0.30	0.01	11.90	1.52	13.98	1.78	15.85	1.81	17.78	1.78
19.88	2.50	21.84	3.80	23.66	4.16	25.78	5.14	27.77	10.00
28.73	16.00	29.66	21.90	30.88	32.40	32.99	50.00	35.00	62.00
36.93	68.80	38.76	75.80	40.83	72.60	42.81	63.90	44.72	62.80
46.50	68.30	48.00	66.90	50.50	65.40	56.00	54.10	57.00	52.60
60.50	49.80	62.50	49.80	63.50	51.20	66.50	44.10	67.00	49.80
69.00	51.20	71.00	46.95	73.00	42.70	76.00	44.10	77.40	33.90
77.50	44.10	78.50	41.30	87.70	31.50	97.50	29.10	106.70	27.50
115.30	26.20	124.00	25.30	132.20	24.60	140.20	23.80	147.90	22.70
153.90	23.10	159.90	23.10	165.30	19.70	165.90	22.70	177.40	22.00
177.70	22.50	182.90	21.80	188.40	21.30	193.60	20.40	198.90	19.60

THE TOTAL ACTIVATION IS 0.1010E+06 NUCLEI /DAY

PROTON ENERGY		PARTIAL ACTIVATION		FRACTIONAL ACTIVATION		PROTON FLUX	
MEV		NUCLEI PER DAY				PROTONS/DAY*CM**2	
1	200.00	0.8218E+03		.008136276		10794.0	
2	195.00	0.8826E+03		.008738756		11143.3	
3	190.00	0.9412E+03		.009318662		11513.3	
4	185.00	0.9957E+03		.009858559		11906.1	
5	180.00	0.1040E+04		.010298584		12323.5	
6	175.00	0.1087E+04		.010759142		12768.0	
7	170.00	0.1094E+04		.010830575		13242.1	
8	165.00	0.1158E+04		.011470091		13748.7	
9	160.00	0.1251E+04		.012383648		14291.3	
10	155.00	0.1294E+04		.012814232		14873.5	
11	150.00	0.1363E+04		.013494718		15499.8	
12	145.00	0.1460E+04		.014460080		16175.0	
13	140.00	0.1562E+04		.015466383		16904.9	
14	135.00	0.1667E+04		.016506752		17696.1	

15	130.00	0.1781E+04	.017635291	18556.3
16	125.00	0.1909E+04	.018904483	19494.7
17	120.00	0.2059E+04	.020388197	20521.7
18	115.00	0.2235E+04	.022125015	21650.2
19	110.00	0.2437E+04	.024132349	22895.1
20	105.00	0.2675E+04	.026488980	24274.7
21	100.00	0.2967E+04	.029375246	25811.0
22	95.00	0.3304E+04	.032714531	26475.5
23	90.00	0.3791E+04	.037531070	27194.4
24	85.00	0.4411E+04	.043672681	27975.7
25	80.00	0.4967E+04	.049180221	28829.0
26	75.00	0.5455E+04	.054008134	29765.9
27	70.00	0.6135E+04	.060743257	30801.2
28	65.00	0.6935E+04	.068669178	31953.4
29	60.00	0.7886E+04	.078076854	33246.3
30	55.00	0.8079E+04	.079992361	34711.2
31	50.00	0.6766E+04	.066993482	36390.0
32	45.00	0.5069E+04	.050187483	37815.7
33	40.00	0.3339E+04	.033058066	39475.7
34	35.00	0.1522E+04	.015068449	41445.9
35	30.00	0.4047E+03	.004006980	43843.0
36	25.00	0.1472E+03	.001457357	47588.0
37	20.00	0.6875E+02	.000680659	52609.5
38	15.00	0.3219E+02	.000318702	59873.0
39	10.00	0.5515E+01	.000054609	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
		NUCLEI/DAY
0.1000E+00		0.4187E+04
0.2000E+00		0.4130E+04
0.3000E+00		0.4047E+04
0.4000E+00		0.3986E+04
0.5000E+00		0.3941E+04
0.6000E+00		0.3840E+04
0.7000E+00		0.3795E+04
0.8000E+00		0.3759E+04
0.9000E+00		0.3701E+04
0.1000E+01		0.3668E+04
0.1100E+01		0.3644E+04
0.1200E+01		0.3588E+04
0.1300E+01		0.3538E+04
0.1400E+01		0.3479E+04
0.1500E+01		0.3387E+04
0.1600E+01		0.3362E+04
0.1700E+01		0.3360E+04
0.1800E+01		0.3336E+04
0.1900E+01		0.3312E+04
0.2000E+01		0.3268E+04
0.2100E+01		0.3216E+04
0.2200E+01		0.3163E+04
0.2300E+01		0.3112E+04
0.2400E+01		0.3069E+04
0.2500E+01		0.3052E+04
0.2600E+01		0.3061E+04
0.2700E+01		0.3043E+04
0.2800E+01		0.3006E+04
0.2900E+01		0.2951E+04

TOTAL OF AZ= 0.1010E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 32									
REACTION		2P		PRODUCT		CO60		Q-VALUE= 9.90 MEV	
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
9.80	0.01	23.66	0.70	25.78	0.86	27.77	0.89	28.73	0.96
29.66	0.75	30.88	0.92	32.99	1.00	35.00	1.10	36.93	1.71
38.76	1.81	40.83	2.02	44.72	1.95	77.40	1.86	87.70	1.79
97.50	1.91	106.70	1.64	115.30	1.57	124.00	1.65	132.20	1.60
140.20	1.74	147.90	1.54	153.90	1.69	159.90	1.77	165.30	1.34
165.90	1.79	177.40	1.69	177.70	1.65	182.90	1.69	188.40	1.73
193.60	1.71	198.90	1.64						

THE TOTAL ACTIVATION IS 0.4677E+04 NUCLEI /DAY

PROTON	PARTIAL	FRACTIONAL
ENERGY	ACTIVATION	ACTIVATION
MEV	NUCLEI PER DAY	

PROTON
FLUX
PROTONS/DAY*CM**2

1	200.00	0.6874E+02	.014697837	10794.0
2	195.00	0.7266E+02	.015536390	11143.3
3	190.00	0.7471E+02	.015974654	11513.3
4	185.00	0.7594E+02	.016236085	11906.1
5	180.00	0.7953E+02	.017003870	12323.5
6	175.00	0.8480E+02	.018131323	12768.0
7	170.00	0.8197E+02	.017527122	13242.1
8	165.00	0.8558E+02	.018298104	13748.7
9	160.00	0.9215E+02	.019702140	14291.3
10	155.00	0.9106E+02	.019469082	14873.5
11	150.00	0.9568E+02	.020456921	15499.8
12	145.00	0.1033E+03	.022085205	16175.0
13	140.00	0.1060E+03	.022660391	16904.9
14	135.00	0.1091E+03	.023330353	17696.1
15	130.00	0.1147E+03	.024514867	18556.3
16	125.00	0.1189E+03	.025431659	19494.7
17	120.00	0.1243E+03	.026586398	20521.7
18	115.00	0.1345E+03	.028766319	21650.2
19	110.00	0.1511E+03	.032305405	22895.1
20	105.00	0.1684E+03	.036004592	24274.7
21	100.00	0.1809E+03	.038668182	25811.0
22	95.00	0.1833E+03	.039188921	26475.5
23	90.00	0.1886E+03	.040319301	27194.4
24	85.00	0.1966E+03	.042042222	27975.7
25	80.00	0.2050E+03	.043823522	28829.0
26	75.00	0.2134E+03	.045623761	29765.9
27	70.00	0.2225E+03	.047580559	30801.2
28	65.00	0.2327E+03	.049758773	31953.4
29	60.00	0.2422E+03	.051776562	33246.3
30	55.00	0.2251E+03	.048122488	34711.2
31	50.00	0.1981E+03	.042348962	36390.0
32	45.00	0.1496E+03	.031992488	37815.7
33	40.00	0.9802E+02	.020957626	39475.7
34	35.00	0.5666E+02	.0121115067	41445.9
35	30.00	0.3363E+02	.007191002	43843.0
36	25.00	0.1413E+02	.003020993	47588.0
37	20.00	0.2910E+01	.000622131	52609.5
38	15.00	0.5200E+00	.000111184	59873.0
39	10.00	0.8132E-01	.000017388	86539.0
40	5.00	0.0000E+00	.000000000	111493.4
DEPTH		ACTIVATION		
GRAMS/SQ CM		NUCLEI/DAY		
	0.1000E+00	0.1890E+03		
	0.2000E+00	0.1873E+03		
	0.3000E+00	0.1849E+03		
	0.4000E+00	0.1828E+03		
	0.5000E+00	0.1793E+03		
	0.6000E+00	0.1769E+03		
	0.7000E+00	0.1747E+03		
	0.8000E+00	0.1731E+03		
	0.9000E+00	0.1718E+03		
	0.1000E+01	0.1693E+03		
	0.1100E+01	0.1665E+03		
	0.1200E+01	0.1649E+03		
	0.1300E+01	0.1634E+03		
	0.1400E+01	0.1620E+03		
	0.1500E+01	0.1603E+03		
	0.1600E+01	0.1576E+03		
	0.1700E+01	0.1558E+03		
	0.1800E+01	0.1541E+03		
	0.1900E+01	0.1528E+03		
	0.2000E+01	0.1515E+03		
	0.2100E+01	0.1504E+03		
	0.2200E+01	0.1484E+03		
	0.2300E+01	0.1466E+03		
	0.2400E+01	0.1448E+03		
	0.2500E+01	0.1441E+03		
	0.2600E+01	0.1432E+03		
	0.2700E+01	0.1420E+03		
	0.2800E+01	0.1406E+03		
	0.2900E+01	0.1388E+03		
TOTAL OF AZ=		0.4677E+04		

THE NUMBER OF CROSS SECTION DATA POINTS IS 25
 REACTION 4P3N PRODUCT MN52 Q-VALUE= 38.77 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 38.76 0.18 40.83 0.41 42.81 0.99 44.72 2.40 50.00 4.20
 56.00 8.40 77.40 13.90 87.70 13.60 97.50 15.10 106.70 16.00
 115.30 15.90 124.00 16.10 132.20 16.10 140.20 16.20 147.90 15.90
 153.90 16.40 159.90 16.20 165.30 15.90 165.90 16.00 177.40 15.70
 177.70 16.00 182.90 15.60 188.40 15.70 193.60 15.70 198.90 15.80

THE TOTAL ACTIVATION IS 0.3035E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.6455E+03	.021268506	10794.0
2 195.00	0.6642E+03	.021887794	11143.3
3 190.00	0.6846E+03	.022558259	11513.3
4 185.00	0.7118E+03	.023453295	11906.1
5 180.00	0.7401E+03	.024385946	12323.5
6 175.00	0.7697E+03	.025363222	12768.0
7 170.00	0.8036E+03	.026479442	13242.1
8 165.00	0.8432E+03	.027784104	13748.7
9 160.00	0.8831E+03	.029099805	14291.3
10 155.00	0.9102E+03	.029991474	14873.5
11 150.00	0.9438E+03	.031097978	15499.8
12 145.00	0.9907E+03	.032643888	16175.0
13 140.00	0.1035E+04	.034112893	16904.9
14 135.00	0.1082E+04	.035638805	17696.1
15 130.00	0.1132E+04	.037290618	18556.3
16 125.00	0.1183E+04	.038988363	19494.7
17 120.00	0.1242E+04	.040921815	20521.7
18 115.00	0.1306E+04	.043023817	21650.2
19 110.00	0.1358E+04	.044763401	22895.1
20 105.00	0.1390E+04	.045799810	24274.7
21 100.00	0.1411E+04	.046506021	25811.0
22 95.00	0.1399E+04	.046106193	26475.5
23 90.00	0.1412E+04	.046522133	27194.4
24 85.00	0.1396E+04	.045985460	27975.7
25 80.00	0.1326E+04	.043686893	28829.0
26 75.00	0.1212E+04	.039927386	29765.9
27 70.00	0.1048E+04	.034533963	30801.2
28 65.00	0.8218E+03	.027079217	31953.4
29 60.00	0.5483E+03	.018067798	33246.3
30 55.00	0.2938E+03	.009680552	34711.2
31 50.00	0.1282E+03	.004223257	36390.0
32 45.00	0.3207E+02	.001056661	37815.7
33 40.00	0.2159E+01	.000071143	39475.7
34 35.00	0.0000E+00	.000000000	41445.9
35 30.00	0.0000E+00	.000000000	43843.0
36 25.00	0.0000E+00	.000000000	47588.0
37 20.00	0.0000E+00	.000000000	52609.5
38 15.00	0.0000E+00	.000000000	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1181E+04
0.2000E+00	0.1169E+04
0.3000E+00	0.1157E+04
0.4000E+00	0.1148E+04
0.5000E+00	0.1139E+04
0.6000E+00	0.1130E+04
0.7000E+00	0.1120E+04
0.8000E+00	0.1107E+04
0.9000E+00	0.1096E+04
0.1000E+01	0.1087E+04
0.1100E+01	0.1078E+04
0.1200E+01	0.1070E+04
0.1300E+01	0.1063E+04
0.1400E+01	0.1054E+04
0.1500E+01	0.1042E+04
0.1600E+01	0.1032E+04
0.1700E+01	0.1023E+04
0.1800E+01	0.1015E+04

0.1900E+01	0.1008E+04
0.2000E+01	0.1001E+04
0.2100E+01	0.9922E+03
0.2200E+01	0.9832E+03
0.2300E+01	0.9740E+03
0.2400E+01	0.9657E+03
0.2500E+01	0.9576E+03
0.2600E+01	0.9497E+03
0.2700E+01	0.9429E+03
0.2800E+01	0.9359E+03
0.2900E+01	0.9279E+03

TOTAL OF AZ= 0.3035E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 45

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
14.10	0.01	17.78	0.01	19.88	0.26	21.84	0.53	23.56	0.74		
25.78	0.97	27.77	1.59	28.73	2.08	29.66	3.04	30.88	3.98		
32.99	5.91	35.00	7.70	36.93	9.24	38.76	10.40	40.83	11.10		
42.81	11.00	44.72	10.30	47.00	12.00	50.00	10.60	54.00	9.70		
57.50	9.70	61.00	8.70	63.50	9.20	69.00	8.50	73.00	8.30		
77.40	5.94	87.70	5.32	97.50	4.90	106.70	4.58	115.30	4.24		
124.00	4.14	132.20	3.96	140.20	3.90	147.90	3.69	153.90	3.75		
159.90	3.55	165.30	3.49	165.90	3.50	177.40	3.31	177.70	3.36		
182.90	3.24	188.40	3.25	193.60	3.16	198.90	3.12	400.00	3.50		

Q-VALUE= 14.00 MEV

THE TOTAL ACTIVATION IS 0.1624E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	200.00	.007936285	10794.0
2	195.00	.008349460	11143.3
3	190.00	.008734379	11513.3
4	185.00	.009153457	11906.1
5	180.00	.009657578	12323.5
6	175.00	.010215816	12768.0
7	170.00	.010806892	13242.1
8	165.00	.011463747	13748.7
9	160.00	.012284630	14291.3
10	155.00	.012944136	14873.5
11	150.00	.013686093	15499.8
12	145.00	.014667239	16175.0
13	140.00	.015593396	16904.9
14	135.00	.016639730	17696.1
15	130.00	.017858775	18556.3
16	125.00	.019131882	19494.7
17	120.00	.020701736	20521.7
18	115.00	.022727780	21650.2
19	110.00	.025068225	22895.1
20	105.00	.027680160	24274.7
21	100.00	.030712388	25811.0
22	95.00	.033064798	26475.5
23	90.00	.036583487	27194.4
24	85.00	.044066370	27975.7
25	80.00	.052472536	28829.0
26	75.00	.060596079	29765.9
27	70.00	.066544682	30801.2
28	65.00	.073897183	31953.4
29	60.00	.080126710	33246.3
30	55.00	.076606192	34711.2
31	50.00	.062896714	36390.0
32	45.00	.044415466	37815.7
33	40.00	.026823170	39475.7
34	35.00	.011647757	41445.9
35	30.00	.003302280	43843.0
36	25.00	.000885120	47588.0
37	20.00	.000052695	52609.5
38	15.00	.000004877	59873.0
39	10.00	.000000000	86539.0
40	5.00	.000000000	111493.4

DEPTH GRAMS/SQ CM

0.1000E+00

0.2000E+00

ACTIVATION NUCLEI/DAY

0.8644E+03

0.6566E+03

0.3000E+00	0.6511E+03
0.4000E+00	0.6441E+03
0.5000E+00	0.6319E+03
0.6000E+00	0.6182E+03
0.7000E+00	0.6066E+03
0.8000E+00	0.6012E+03
0.9000E+00	0.5957E+03
0.1000E+01	0.5920E+03
0.1100E+01	0.5868E+03
0.1200E+01	0.5759E+03
0.1300E+01	0.5654E+03
0.1400E+01	0.5554E+03
0.1500E+01	0.5510E+03
0.1600E+01	0.5477E+03
0.1700E+01	0.5421E+03
0.1800E+01	0.5388E+03
0.1900E+01	0.5303E+03
0.2000E+01	0.5227E+03
0.2100E+01	0.5155E+03
0.2200E+01	0.5114E+03
0.2300E+01	0.5048E+03
0.2400E+01	0.4998E+03
0.2500E+01	0.4971E+03
0.2600E+01	0.4931E+03
0.2700E+01	0.4867E+03
0.2800E+01	0.4803E+03
0.2900E+01	0.4751E+03

TOTAL OF AZ= 0.1624E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 46

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	9.98 MEV
9.97	0.01	11.90	0.02	13.98	0.62	15.85	15.10	17.78	61.80		
19.88	116.00	21.84	140.00	23.66	159.00	25.78	171.00	27.77	174.00		
23.73	167.00	29.66	155.00	30.88	142.00	32.99	118.00	35.00	103.00		
36.93	94.60	38.76	87.40	40.83	84.40	42.81	81.40	44.72	79.70		
47.00	82.50	54.00	79.50	57.00	82.50	62.50	75.00	66.50	72.00		
71.00	73.50	75.50	69.00	77.40	56.40	87.70	50.90	97.50	46.00		
106.70	42.80	115.30	40.50	124.00	38.70	132.20	37.60	140.20	36.30		
147.90	35.00	153.90	34.50	159.90	33.30	165.30	32.30	165.90	32.70		
177.40	31.10	177.70	32.10	182.90	30.40	188.40	30.00	193.60	19.50		
198.90	29.30										

THE TOTAL ACTIVATION IS 0.1899E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1	0.9970E+03	.005251295	10794.0
2	0.1053E+04	.005543739	11143.3
3	0.1306E+04	.006876770	11513.3
4	0.1402E+04	.007384784	11906.1
5	0.1478E+04	.007782164	12323.5
6	0.1554E+04	.008183123	12768.0
7	0.1637E+04	.008622654	13242.1
8	0.1735E+04	.009137198	13748.7
9	0.1853E+04	.009761693	14291.3
10	0.1967E+04	.010361829	14873.5
11	0.2090E+04	.011005510	15499.8
12	0.2232E+04	.011755189	16175.0
13	0.2386E+04	.012566333	16904.9
14	0.2549E+04	.013423858	17696.1
15	0.2728E+04	.014370340	18556.3
16	0.2938E+04	.015473517	19494.7
17	0.3185E+04	.016777625	20521.7
18	0.3475E+04	.018301805	21650.2
19	0.3816E+04	.020098297	22895.1
20	0.4228E+04	.022267286	24274.7
21	0.4725E+04	.024885926	25811.0
22	0.5113E+04	.026929880	26475.5
23	0.5691E+04	.029973341	27194.4
24	0.6609E+04	.034811690	27975.7
25	0.7492E+04	.039458074	28829.0
26	0.8404E+04	.044262350	29765.9
27	0.8986E+04	.047331151	30801.2

28	65.00	0.9612E+04	.050623760	31953.4
29	60.00	0.1035E+05	.054488011	33246.3
30	55.00	0.1209E+05	.063695565	34711.2
31	50.00	0.1517E+05	.079888128	36390.0
32	45.00	0.1435E+05	.075570859	37815.7
33	40.00	0.1260E+05	.066357367	39475.7
34	35.00	0.1067E+05	.056220844	41445.9
35	30.00	0.7946E+04	.041849393	43843.0
36	25.00	0.4294E+04	.022613946	47588.0
37	20.00	0.1151E+04	.006064838	52609.5
38	15.00	0.5592E+01	.000029456	59873.0
39	10.00	0.7214E-01	.000000380	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION
NUCLEI/DAY		
0.1000E+00		0.8449E+04
0.2000E+00		0.8224E+04
0.3000E+00		0.7961E+04
0.4000E+00		0.7841E+04
0.5000E+00		0.7641E+04
0.6000E+00		0.7416E+04
0.7000E+00		0.7276E+04
0.8000E+00		0.7223E+04
0.9000E+00		0.7079E+04
0.1000E+01		0.6882E+04
0.1100E+01		0.6741E+04
0.1200E+01		0.6722E+04
0.1300E+01		0.6660E+04
0.1400E+01		0.6483E+04
0.1500E+01		0.6295E+04
0.1600E+01		0.6220E+04
0.1700E+01		0.6248E+04
0.1800E+01		0.6250E+04
0.1900E+01		0.6073E+04
0.2000E+01		0.5876E+04
0.2100E+01		0.5781E+04
0.2200E+01		0.5780E+04
0.2300E+01		0.5790E+04
0.2400E+01		0.5745E+04
0.2500E+01		0.5604E+04
0.2600E+01		0.5429E+04
0.2700E+01		0.5379E+04
0.2800E+01		0.5395E+04
0.2900E+01		0.5399E+04

TOTAL OF AZ= 0.1899E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48									
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
1.35	0.01	7.44	0.07	7.97	0.27	8.44	0.80	9.23	2.87
9.73	4.50	10.08	6.33	10.80	10.70	11.00	11.60	11.90	14.50
12.20	14.30	13.98	22.60	15.85	28.00	17.78	27.30	19.88	21.20
21.84	12.20	23.66	7.54	25.78	4.18	27.77	3.07	28.73	3.11
29.66	2.60	30.88	2.70	32.99	2.52	35.00	3.52	36.93	4.70
38.76	5.74	40.83	9.24	42.81	13.50	44.72	19.50	77.40	32.60
87.70	30.60	97.50	27.00	106.70	24.60	115.30	23.90	124.00	23.30
132.20	22.40	140.20	20.70	147.90	20.80	153.90	22.30	159.90	20.60
165.30	20.40	165.90	21.20	177.40	18.80	177.70	20.90	182.90	18.00
188.40	19.60	193.60	17.60	198.90	19.00				

THE TOTAL ACTIVATION IS 0.6356E+05 NUCLEI /DAY

PROTON	PARTIAL	FRACTIONAL	PROTON
ENERGY	ACTIVATION	ACTIVATION	FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1 200.00	0.7515E+03	.011823251	10794.0
2 195.00	0.7868E+03	.012379569	11143.3
3 190.00	0.8227E+03	.012943185	11513.3
4 185.00	0.8628E+03	.013574312	11906.1
5 180.00	0.9194E+03	.014466134	12323.5
6 175.00	0.9798E+03	.015415129	12768.0
7 170.00	0.1037E+04	.016312011	13242.1
8 165.00	0.1087E+04	.017102044	13748.7
9 160.00	0.1170E+04	.018412067	14291.3
10 155.00	0.1208E+04	.019006466	14873.5

11	150.00	0.1225E+04	.019266471	15499.8
12	145.00	0.1291E+04	.020315252	16175.0
13	140.00	0.1400E+04	.022034166	16904.9
14	135.00	0.1522E+04	.023938598	17696.1
15	130.00	0.1634E+04	.025715092	18556.3
16	125.00	0.1748E+04	.027508514	19494.7
17	120.00	0.1870E+04	.029428555	20521.7
18	115.00	0.2018E+04	.031742800	21650.2
19	110.00	0.2215E+04	.034845226	22895.1
20	105.00	0.2479E+04	.038996585	24274.7
21	100.00	0.2803E+04	.044098180	25811.0
22	95.00	0.3038E+04	.047794417	26475.5
23	90.00	0.3238E+04	.050950982	27194.4
24	85.00	0.3302E+04	.051954903	27975.7
25	80.00	0.3246E+04	.051063746	28829.0
26	75.00	0.3091E+04	.048628725	29765.9
27	70.00	0.2931E+04	.046121810	30801.2
28	65.00	0.2774E+04	.043652363	31953.4
29	60.00	0.2331E+04	.036676176	33246.3
30	55.00	0.1767E+04	.027797936	34711.2
31	50.00	0.1368E+04	.021531181	36390.0
32	45.00	0.1409E+04	.022175778	37815.7
33	40.00	0.1087E+04	.017104302	39475.7
34	35.00	0.9979E+03	.015700426	41445.9
35	30.00	0.9861E+03	.015514093	43843.0
36	25.00	0.9873E+03	.015533536	47588.0
37	20.00	0.8317E+03	.013085746	52609.5
38	15.00	0.3285E+03	.005169162	59873.0
39	10.00	0.1405E+02	.000221096	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00	0.1000E+00	0.2678E+04	0.2678E+04
0.2000E+00	0.2000E+00	0.2621E+04	0.2621E+04
0.3000E+00	0.3000E+00	0.2551E+04	0.2551E+04
0.4000E+00	0.4000E+00	0.2511E+04	0.2511E+04
0.5000E+00	0.5000E+00	0.2477E+04	0.2477E+04
0.6000E+00	0.6000E+00	0.2422E+04	0.2422E+04
0.7000E+00	0.7000E+00	0.2387E+04	0.2387E+04
0.8000E+00	0.8000E+00	0.2355E+04	0.2355E+04
0.9000E+00	0.9000E+00	0.2328E+04	0.2328E+04
0.1000E+01	0.1000E+01	0.2273E+04	0.2273E+04
0.1100E+01	0.1100E+01	0.2261E+04	0.2261E+04
0.1200E+01	0.1200E+01	0.2232E+04	0.2232E+04
0.1300E+01	0.1300E+01	0.2218E+04	0.2218E+04
0.1400E+01	0.1400E+01	0.2169E+04	0.2169E+04
0.1500E+01	0.1500E+01	0.2160E+04	0.2160E+04
0.1600E+01	0.1600E+01	0.2138E+04	0.2138E+04
0.1700E+01	0.1700E+01	0.2100E+04	0.2100E+04
0.1800E+01	0.1800E+01	0.2080E+04	0.2080E+04
0.1900E+01	0.1900E+01	0.2048E+04	0.2048E+04
0.2000E+01	0.2000E+01	0.2053E+04	0.2053E+04
0.2100E+01	0.2100E+01	0.2041E+04	0.2041E+04
0.2200E+01	0.2200E+01	0.2000E+04	0.2000E+04
0.2300E+01	0.2300E+01	0.1975E+04	0.1975E+04
0.2400E+01	0.2400E+01	0.1941E+04	0.1941E+04
0.2500E+01	0.2500E+01	0.1949E+04	0.1949E+04
0.2600E+01	0.2600E+01	0.1941E+04	0.1941E+04
0.2700E+01	0.2700E+01	0.1919E+04	0.1919E+04
0.2800E+01	0.2800E+01	0.1883E+04	0.1883E+04
0.2900E+01	0.2900E+01	0.1848E+04	0.1848E+04

TOTAL OF AZ= 0.6356E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 43				Q-VALUE= 1.84 MEV			
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
11.70	0.01	15.85	0.01	17.78	0.02	19.88	0.76
23.66	9.30	25.78	15.80	27.77	34.00	28.73	47.80
30.88	91.60	32.99	142.00	35.00	172.00	36.93	194.00
40.83	211.00	42.81	197.00	44.72	177.00	48.00	186.00
57.00	128.00	62.50	124.00	67.00	116.00	71.00	118.00
87.70	74.00	97.50	65.90	106.70	60.90	115.30	57.10
132.20	52.50	140.20	50.90	147.90	48.50	153.90	47.80

165.30 45.20 165.90 44.40 177.40 42.50 177.70 43.50 182.90 41.80
 188.40 41.50 193.60 40.40 198.90 40.20

THE TOTAL ACTIVATION IS 0.2433E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
1 200.00	0.1654E+04	.006795293
2 195.00	0.1734E+04	.007123734
3 190.00	0.1821E+04	.007482003
4 185.00	0.1918E+04	.007880852
5 180.00	0.2014E+04	.008274664
6 175.00	0.2115E+04	.008691199
7 170.00	0.2252E+04	.009255649
8 165.00	0.2403E+04	.009872981
9 160.00	0.2564E+04	.010535150
10 155.00	0.2728E+04	.011208621
11 150.00	0.2910E+04	.011957604
12 145.00	0.3122E+04	.012828156
13 140.00	0.3339E+04	.013720192
14 135.00	0.3578E+04	.014704672
15 130.00	0.3850E+04	.015823118
16 125.00	0.4151E+04	.017057031
17 120.00	0.4504E+04	.018509924
18 115.00	0.4933E+04	.020270623
19 110.00	0.5442E+04	.022364136
20 105.00	0.6060E+04	.024904523
21 100.00	0.6819E+04	.028020689
22 95.00	0.7450E+04	.030613847
23 90.00	0.8275E+04	.034003351
24 85.00	0.9849E+04	.040472019
25 80.00	0.1155E+05	.047455695
26 75.00	0.1331E+05	.054694660
27 70.00	0.1499E+05	.061591763
28 65.00	0.1762E+05	.072417974
29 60.00	0.2085E+05	.085679762
30 55.00	0.2197E+05	.090278007
31 50.00	0.1894E+05	.077825002
32 45.00	0.1425E+05	.058549054
33 40.00	0.9118E+04	.037469961
34 35.00	0.4147E+04	.017041806
35 30.00	0.9776E+03	.004017215
36 25.00	0.1455E+03	.000597889
37 20.00	0.2157E+01	.000008864
38 15.00	0.3164E+00	.000001300
39 10.00	0.2289E+00	.000000941
40 5.00	0.0000E+00	.000000000

PROTON
FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.1010E+05
0.2000E+00	0.9951E+04
0.3000E+00	0.9834E+04
0.4000E+00	0.9665E+04
0.5000E+00	0.9520E+04
0.6000E+00	0.9345E+04
0.7000E+00	0.9178E+04
0.8000E+00	0.9066E+04
0.9000E+00	0.8979E+04
0.1000E+01	0.8891E+04
0.1100E+01	0.8759E+04
0.1200E+01	0.8596E+04
0.1300E+01	0.8451E+04
0.1400E+01	0.8324E+04
0.1500E+01	0.8279E+04
0.1600E+01	0.8231E+04
0.1700E+01	0.8125E+04
0.1800E+01	0.8022E+04
0.1900E+01	0.7893E+04
0.2000E+01	0.7758E+04
0.2100E+01	0.7661E+04
0.2200E+01	0.7616E+04
0.2300E+01	0.7538E+04
0.2400E+01	0.7481E+04

0.2500E+01 0.7423E+04
 0.2600E+01 0.7335E+04
 0.2700E+01 0.7197E+04
 0.2800E+01 0.7092E+04
 0.2900E+01 0.7036E+04
 TOTAL OF AZ= 0.2433E+06
 THE NUMBER OF CROSS SECTION DATA POINTS IS 48
 REACTION HE-4 PRODUCT CO57 Q-VALUE= 0.29 MEV

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
0.30	0.01	7.44	0.39	7.97	0.94	8.44	1.72	9.23	3.32
9.73	4.10	10.08	4.83	10.80	6.89	11.00	7.50	11.90	15.90
12.20	14.10	13.98	61.40	15.85	228.00	17.78	347.00	19.88	396.00
21.84	377.00	23.66	348.00	25.78	320.00	27.77	277.00	28.73	261.00
29.66	202.00	30.88	206.00	32.99	161.00	35.00	129.00	36.93	114.00
38.76	103.00	40.83	101.00	42.81	103.00	44.72	106.00	77.40	87.00
87.70	82.00	97.50	67.00	106.70	65.00	115.30	58.00	124.00	59.00
132.20	56.40	140.20	52.80	147.90	50.50	153.90	49.40	159.90	47.70
165.30	46.60	165.90	46.00	177.40	45.20	177.70	45.20	182.90	44.80
188.40	44.20	193.60	42.60	198.90	42.60				

THE TOTAL ACTIVATION IS 0.3111E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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1	200.00	0.1748E+04	.005620207
2	195.00	0.1838E+04	.005908307
3	190.00	0.1943E+04	.006246191
4	185.00	0.2032E+04	.006532612
5	180.00	0.2121E+04	.006817097
6	175.00	0.2214E+04	.007117292
7	170.00	0.2336E+04	.007509550
8	165.00	0.2489E+04	.008001869
9	160.00	0.2656E+04	.008538925
10	155.00	0.2831E+04	.009099578
11	150.00	0.3024E+04	.009721618
12	145.00	0.3262E+04	.010485834
13	140.00	0.3543E+04	.011389489
14	135.00	0.3841E+04	.012347904
15	130.00	0.4108E+04	.013205105
16	125.00	0.4335E+04	.013933849
17	120.00	0.4666E+04	.014997525
18	115.00	0.5163E+04	.016595032
19	110.00	0.5684E+04	.018271886
20	105.00	0.6308E+04	.020275056
21	100.00	0.7233E+04	.023250664
22	95.00	0.8023E+04	.025788410
23	90.00	0.8702E+04	.027973536
24	85.00	0.9262E+04	.029770935
25	80.00	0.9857E+04	.031683996
26	75.00	0.1052E+05	.033811398
27	70.00	0.1125E+05	.036176670
28	65.00	0.1207E+05	.038806867
29	60.00	0.1285E+05	.041311838
30	55.00	0.1546E+05	.049689792
31	50.00	0.2321E+05	.074591242
32	45.00	0.2664E+05	.085638478
33	40.00	0.2480E+05	.079708122
34	35.00	0.2303E+05	.074035391
35	30.00	0.1982E+05	.063699521
36	25.00	0.1441E+05	.046318248
37	20.00	0.7133E+04	.022927377
38	15.00	0.6592E+03	.002118988
39	10.00	0.2597E+02	.000083474
40	5.00	0.0000E+00	.000000000

PROTON FLUX
 PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111433.4

DEPTH
 GRAMS/SQ CM
 0.1000E+00
 0.2000E+00
 0.3000E+00
 0.4000E+00
 0.5000E+00
 0.6000E+00
 0.7000E+00

ACTIVATION
 NUCLEI/DAY
 0.1450E+05
 0.1431E+05
 0.1390E+05
 0.1313E+05
 0.1280E+05
 0.1260E+05
 0.1205E+05

0.8000E+00	0.1174E+05
0.9000E+00	0.1174E+05
0.1000E+01	0.1150E+05
0.1100E+01	0.1096E+05
0.1200E+01	0.1069E+05
0.1300E+01	0.1080E+05
0.1400E+01	0.1082E+05
0.1500E+01	0.1054E+05
0.1600E+01	0.9812E+04
0.1700E+01	0.9785E+04
0.1800E+01	0.9965E+04
0.1900E+01	0.9992E+04
0.2000E+01	0.9783E+04
0.2100E+01	0.9219E+04
0.2200E+01	0.8891E+04
0.2300E+01	0.9086E+04
0.2400E+01	0.9270E+04
0.2500E+01	0.9274E+04
0.2600E+01	0.8973E+04
0.2700E+01	0.8355E+04
0.2800E+01	0.8273E+04
0.2900E+01	0.8323E+04

TOTAL OF AZ= 0.3111E+06
 PHYLALBD job terminated at 29-MAY-1991 11:58:13.81

Accounting information:

Buffered I/O count:	99	Peak working set size:	464
Direct I/O count:	180	Peak page file size:	2527
Page faults:	792	Mounted volumes:	0
Charged CPU time:	0 00:00:03.65	Elapsed time:	0 00:00:17.77

\$run ptrap4
 ENTER THE NAME OF THE DATA FILE BEING USED
 pnid

THE TARGET IS NI
 TM,C,AND A ARE 58.710 148.000 3.300
 NCM= 10 NQM= 2 NMC= 2
 THE COVERING MATERIAL IS ALUM
 TC,CC, AND AC ARE 27.000 184.000 5.200
 THICKNESS OF COVERING MATERIAL 0.00
 THE INELASTIC XSECTIONS FOR COVERING
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 610.00 17.00 690.00 30.00 700.00 35.00 660.00 40.00 650.00
 60.00 500.00 100.00 425.00 225.00 400.00 340.00 402.00 460.00 422.00
 NO COVERING MATERIAL
 THE INELASTIC XSECTIONS OF THE TARGET
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 10.00 813.00 17.00 922.00 30.00 932.00 35.00 922.00 40.00 911.00
 60.00 828.00 100.00 777.00 225.00 708.00 340.00 703.00 460.00 730.00
 TARGET THICKNESS 2.826 GM/CM**2 WIDTH 5.080CM LENGTH 5.080 CM
 INITIAL THETA 0.0 FINAL THETA 89.0 INCREMENT 11.0
 INITIAL PHI 0.0 FINAL PHI 0.0 INCREMENT 1.0
 200.00 5.00 5.00 0.100 9
 THE NUMBER OF REACTIONS EQUAL 9
 THE NUMBER OF PROTON FLUX DATA POINTS IS 15
 MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY MEV P/SQCM*DAY
 1.0 211010.0 1.5 129570.0 2.0 120000.0 2.5 120000.0 3.0 113220.0
 3.7 113180.0 4.5 113430.0 6.0 108220.0 10.0 86539.0 15.0 59873.0
 30.0 43843.0 50.0 36390.0 100.0 25811.0 200.0 10794.0 300.0 4017.6

THE NUMBER OF CROSS SECTION DATA POINTS IS 25
 REACTION 4PN PRODUCT MN54 Q-VALUE= 33.00 MEV
 MEV MBS MEV MBS MEV MBS MEV MBS MEV MBS
 41.00 0.60 44.00 1.90 48.00 4.70 50.00 8.10 52.00 15.00
 56.00 21.00 77.40 23.90 87.70 21.60 97.50 20.20 106.70 20.00
 115.30 19.20 124.00 19.20 132.20 19.00 140.20 18.70 147.90 18.10
 153.90 19.10 159.90 18.50 165.30 17.70 165.90 18.20 177.40 17.90
 177.70 18.00 182.90 17.90 188.40 17.80 193.60 17.50 198.90 17.70

THE TOTAL ACTIVATION IS 0.8037E+05 NUCLBI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLBI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.21058E+04	.026194457	10794.0
2 195.00	0.21428E+04	.026645359	11143.3
3 190.00	0.21858E+04	.027183484	11513.3
4 185.00	0.22248E+04	.027670402	11906.1
5 180.00	0.22668E+04	.028190937	12323.5
6 175.00	0.23138E+04	.028778153	12768.0
7 170.00	0.23648E+04	.029406676	13242.1
8 165.00	0.24258E+04	.030166319	13748.7
9 160.00	0.24898E+04	.030964747	14291.3
10 155.00	0.25368E+04	.031547375	14873.5
11 150.00	0.25918E+04	.032238062	15499.8
12 145.00	0.26768E+04	.033288643	16175.0
13 140.00	0.27658E+04	.034397505	16904.9
14 135.00	0.28618E+04	.035591472	17696.1
15 130.00	0.29658E+04	.036887154	18556.3
16 125.00	0.30768E+04	.038267091	19494.7
17 120.00	0.32028E+04	.039834499	20521.7
18 115.00	0.33118E+04	.041190427	21650.2
19 110.00	0.34048E+04	.042353705	22895.1
20 105.00	0.35068E+04	.043623436	24274.7
21 100.00	0.36348E+04	.045211110	25811.0
22 95.00	0.36428E+04	.045312349	26475.5
23 90.00	0.35978E+04	.044751693	27194.4
24 85.00	0.34778E+04	.043264285	27975.7
25 80.00	0.32668E+04	.040640913	28829.0
26 75.00	0.29418E+04	.036590952	29765.9
27 70.00	0.24778E+04	.030814942	30801.2
28 65.00	0.18718E+04	.023273250	31953.4
29 60.00	0.12378E+04	.015388428	33246.3
30 55.00	0.61228E+03	.007616728	34711.2
31 50.00	0.17288E+03	.002150574	36390.0
32 45.00	0.39488E+02	.000491153	37815.7

33	40.00	0.5459E+01	.000067921	39475.7
34	35.00	0.4496E+00	.0000055594	41445.9
35	30.00	0.0000E+00	.0000000000	43843.0
36	25.00	0.0000E+00	.0000000000	47588.0
37	20.00	0.0000E+00	.0000000000	52609.5
38	15.00	0.0000E+00	.0000000000	59873.0
39	10.00	0.0000E+00	.0000000000	86539.0
40	5.00	0.0000E+00	.0000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
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0.1000E+00	0.6907E+04
0.2000E+00	0.6184E+04
0.3000E+00	0.5792E+04
0.4000E+00	0.4520E+04
0.5000E+00	0.4503E+04
0.6000E+00	0.4043E+04
0.7000E+00	0.3696E+04
0.8000E+00	0.3086E+04
0.9000E+00	0.3087E+04
0.1000E+01	0.2590E+04
0.1100E+01	0.2868E+04
0.1200E+01	0.2149E+04
0.1300E+01	0.2344E+04
0.1400E+01	0.2132E+04
0.1500E+01	0.1835E+04
0.1600E+01	0.2211E+04
0.1700E+01	0.1769E+04
0.1800E+01	0.2120E+04
0.1900E+01	0.1709E+04
0.2000E+01	0.1663E+04
0.2100E+01	0.2039E+04
0.2200E+01	0.1742E+04
0.2300E+01	0.1674E+04
0.2400E+01	0.1692E+04
0.2500E+01	0.1618E+04
0.2600E+01	0.1951E+04
0.2700E+01	0.1671E+04
0.2800E+01	0.1338E+04
0.2900E+01	0.1443E+04

TOTAL OF AZ= 0.8037E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 55

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	Q-VALUE=	0.39 MEV
0.30	0.01	11.90	1.52	13.98	1.78	15.85	1.81	17.78	1.78				
19.88	2.50	21.84	3.80	23.66	4.16	25.78	5.14	27.77	10.00				
28.73	16.00	29.66	21.90	30.88	32.40	32.99	50.00	35.00	62.00				
36.93	68.80	38.76	75.80	40.83	72.60	42.81	63.90	44.72	62.80				
46.50	68.30	48.00	66.90	50.50	65.40	56.00	54.10	57.00	52.60				
60.50	49.80	62.50	49.80	63.50	51.20	66.50	44.10	67.00	49.80				
69.00	51.20	71.00	46.95	73.00	42.70	76.00	44.10	77.40	33.90				
77.50	44.10	78.50	41.30	87.70	31.50	97.50	29.10	106.70	27.50				
115.30	26.20	124.00	25.30	132.20	24.60	140.20	23.80	147.90	22.70				
153.90	23.10	159.90	23.10	165.30	19.70	165.90	22.70	177.40	22.00				
177.70	22.50	182.90	21.80	188.40	21.30	193.60	20.40	198.90	19.60				

THE TOTAL ACTIVATION IS 0.1834E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	0.2842E+04	.015500299	10794.0
2	0.2940E+04	.016034096	11143.3
3	0.3035E+04	.016549712	11513.3
4	0.3116E+04	.016995244	11906.1
5	0.3194E+04	.017417898	12323.5
6	0.3267E+04	.017818160	12768.0
7	0.3341E+04	.018220486	13242.1
8	0.3447E+04	.018799219	13748.7
9	0.3587E+04	.019560728	14291.3
10	0.3694E+04	.020144919	14873.5
11	0.3829E+04	.020885020	15499.8
12	0.3999E+04	.021808391	16175.0
13	0.4180E+04	.022794466	16904.9
14	0.4389E+04	.023936173	17696.1

15	130.00	0.4630E+04	.025248935	18556.3
16	125.00	0.4922E+04	.026846372	19494.7
17	120.00	0.5256E+04	.028664047	20521.7
18	115.00	0.5682E+04	.030986637	21650.2
19	110.00	0.6183E+04	.033722065	22895.1
20	105.00	0.6609E+04	.036041927	24274.7
21	100.00	0.7061E+04	.038510181	25811.0
22	95.00	0.7393E+04	.040322635	26475.5
23	90.00	0.7826E+04	.042681213	27194.4
24	85.00	0.8351E+04	.045545202	27975.7
25	80.00	0.8734E+04	.047635045	28829.0
26	75.00	0.8926E+04	.048680868	29765.9
27	70.00	0.9143E+04	.049863949	30801.2
28	65.00	0.9157E+04	.049939446	31953.4
29	60.00	0.8993E+04	.049043719	33246.3
30	55.00	0.8244E+04	.044961054	34711.2
31	50.00	0.6801E+04	.037092708	36390.0
32	45.00	0.5070E+04	.027649308	37815.7
33	40.00	0.3339E+04	.018209312	39475.7
34	35.00	0.1522E+04	.008300127	41445.9
35	30.00	0.4047E+03	.002207157	43843.0
36	25.00	0.1472E+03	.000802753	47588.0
37	20.00	0.6875E+02	.000374926	52609.5
38	15.00	0.3219E+02	.000175550	59873.0
39	10.00	0.5515E+01	.000030080	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.1643E+05
0.2000E+00	0.1415E+05
0.3000E+00	0.1322E+05
0.4000E+00	0.1021E+05
0.5000E+00	0.1020E+05
0.6000E+00	0.9180E+04
0.7000E+00	0.8412E+04
0.8000E+00	0.7099E+04
0.9000E+00	0.7123E+04
0.1000E+01	0.6067E+04
0.1100E+01	0.6775E+04
0.1200E+01	0.5154E+04
0.1300E+01	0.5610E+04
0.1400E+01	0.4999E+04
0.1500E+01	0.4107E+04
0.1600E+01	0.4961E+04
0.1700E+01	0.3963E+04
0.1800E+01	0.4725E+04
0.1900E+01	0.3804E+04
0.2000E+01	0.3710E+04
0.2100E+01	0.4532E+04
0.2200E+01	0.3839E+04
0.2300E+01	0.3694E+04
0.2400E+01	0.3743E+04
0.2500E+01	0.3569E+04
0.2600E+01	0.4296E+04
0.2700E+01	0.3665E+04
0.2800E+01	0.2946E+04
0.2900E+01	0.3190E+04

TOTAL OF AZ= 0.1834E+06

MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
9.80	0.01	23.66	0.70	25.78	0.86	27.77	0.89	28.73	0.96				
29.66	0.75	30.88	0.92	32.99	1.00	35.00	1.10	36.93	1.71				
38.76	1.81	40.83	2.02	44.72	1.95	77.40	1.86	87.70	1.79				
97.50	1.91	106.70	1.64	115.30	1.57	124.00	1.65	132.20	1.60				
140.20	1.74	147.90	1.54	153.90	1.69	159.90	1.77	165.30	1.34				
165.90	1.79	177.40	1.69	177.70	1.65	182.90	1.69	188.40	1.73				
193.60	1.71	198.90	1.64										

THE TOTAL ACTIVATION IS 0.8520E+04 NUCLEI /DAY

PROTON
FLUX
ENERGY
MEV

PARTIAL
ACTIVATION
NUCLEI PER DAY

FRACTIONAL
ACTIVATION

PROTON
FLUX
PROTONS/DAY*CM**2

1	200.00	0.1992E+03	.023379646	10794.0
2	195.00	0.2033E+03	.023866160	11143.3
3	190.00	0.2059E+03	.024161207	11513.3
4	185.00	0.2077E+03	.024378140	11906.1
5	180.00	0.2117E+03	.024846736	12323.5
6	175.00	0.2155E+03	.025291156	12768.0
7	170.00	0.2160E+03	.025353573	13242.1
8	165.00	0.2191E+03	.025717266	13748.7
9	160.00	0.2259E+03	.026518388	14291.3
10	155.00	0.2272E+03	.026667811	14873.5
11	150.00	0.2330E+03	.027351810	15499.8
12	145.00	0.2417E+03	.028336816	16175.0
13	140.00	0.2467E+03	.028952260	16904.9
14	135.00	0.2520E+03	.029574862	17696.1
15	130.00	0.2603E+03	.030554283	18556.3
16	125.00	0.2694E+03	.031623360	19494.7
17	120.00	0.2805E+03	.032916643	20521.7
18	115.00	0.2964E+03	.034789715	21650.2
19	110.00	0.3157E+03	.037050139	22895.1
20	105.00	0.3316E+03	.038921643	24274.7
21	100.00	0.3416E+03	.040093988	25811.0
22	95.00	0.3354E+03	.039361835	26475.5
23	90.00	0.3315E+03	.038907196	27194.4
24	85.00	0.3302E+03	.038758807	27975.7
25	80.00	0.3260E+03	.038259361	28829.0
26	75.00	0.3194E+03	.037490319	29765.9
27	70.00	0.3093E+03	.036302723	30801.2
28	65.00	0.2952E+03	.034761641	31953.4
29	60.00	0.2752E+03	.032299597	33246.3
30	55.00	0.2411E+03	.028297190	34711.2
31	50.00	0.1998E+03	.023444947	36390.0
32	45.00	0.1496E+03	.017562129	37815.7
33	40.00	0.9802E+02	.011504595	39475.7
34	35.00	0.5666E+02	.006650508	41445.9
35	30.00	0.3363E+02	.003947468	43843.0
36	25.00	0.1413E+02	.001658360	47588.0
37	20.00	0.2910E+01	.000341516	52609.5
38	15.00	0.5200E+00	.000061034	59873.0
39	10.00	0.8132E-01	.000009545	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH

GRAMS/SQ CM

0.1000E+00
0.2000E+00
0.3000E+00
0.4000E+00
0.5000E+00
0.6000E+00
0.7000E+00
0.8000E+00
0.9000E+00
0.1000E+01
0.1100E+01
0.1200E+01
0.1300E+01
0.1400E+01
0.1500E+01
0.1600E+01
0.1700E+01
0.1800E+01
0.1900E+01
0.2000E+01
0.2100E+01
0.2200E+01
0.2300E+01
0.2400E+01
0.2500E+01
0.2600E+01
0.2700E+01
0.2800E+01
0.2900E+01

ACTIVATION

NUCLEI/DAY

0.7547E+03
0.6596E+03
0.6158E+03
0.4778E+03
0.4740E+03
0.4274E+03
0.3899E+03
0.3258E+03
0.3276E+03
0.2762E+03
0.3073E+03
0.2313E+03
0.2553E+03
0.2308E+03
0.1936E+03
0.2325E+03
0.1859E+03
0.2221E+03
0.1788E+03
0.1740E+03
0.2134E+03
0.1816E+03
0.1747E+03
0.1760E+03
0.1685E+03
0.2033E+03
0.1730E+03
0.1393E+03
0.1497E+03

TOTAL OF AZ= 0.8520E+04

THE NUMBER OF CROSS SECTION DATA POINTS IS 25

REACTION	4P3N	PRODUCT	MN52	Q-VALUE=	38.77 MEV
MEV	MBS	MEV	MBS	MEV	MBS
38.76	0.18	40.83	0.41	42.81	0.99
56.00	8.40	77.40	13.90	87.70	13.60
115.30	15.90	124.00	16.10	132.20	16.10
153.90	16.40	159.90	16.20	165.30	15.90
177.70	16.00	182.90	15.60	188.40	15.70
					193.60
					15.70
					198.90
					15.80

THE TOTAL ACTIVATION IS 0.5613E+05 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION
MEV	NUCLEI PER DAY	

1	200.00	0.1781E+04	.031728674
2	195.00	0.1803E+04	.032121889
3	190.00	0.1829E+04	.032583017
4	185.00	0.1859E+04	.033112563
5	180.00	0.1892E+04	.033705443
6	175.00	0.1926E+04	.034313627
7	170.00	0.1964E+04	.034991011
8	165.00	0.2004E+04	.035705291
9	160.00	0.2042E+04	.036381356
10	155.00	0.2073E+04	.036937281
11	150.00	0.2109E+04	.037570037
12	145.00	0.2154E+04	.038378030
13	140.00	0.2195E+04	.039100055
14	135.00	0.2236E+04	.039836939
15	130.00	0.2279E+04	.040598609
16	125.00	0.2316E+04	.041252848
17	120.00	0.2346E+04	.041796580
18	115.00	0.2359E+04	.042030945
19	110.00	0.2348E+04	.041830193
20	105.00	0.2313E+04	.041202500
21	100.00	0.2271E+04	.040461004
22	95.00	0.2148E+04	.038264833
23	90.00	0.2018E+04	.035948735
24	85.00	0.1860E+04	.033140849
25	80.00	0.1653E+04	.029450260
26	75.00	0.1398E+04	.024901232
27	70.00	0.1120E+04	.019944906
28	65.00	0.8317E+03	.014816089
29	60.00	0.5483E+03	.009768293
30	55.00	0.2938E+03	.005233754
31	50.00	0.1282E+03	.002283288
32	45.00	0.3207E+02	.000571280
33	40.00	0.2159E+01	.000038463
34	35.00	0.0000E+00	.000000000
35	30.00	0.0000E+00	.000000000
36	25.00	0.0000E+00	.000000000
37	20.00	0.0000E+00	.000000000
38	15.00	0.0000E+00	.000000000
39	10.00	0.0000E+00	.000000000
40	5.00	0.0000E+00	.000000000

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH

GRAMS/SQ CM

0.1000E+00
0.2000E+00
0.3000E+00
0.4000E+00
0.5000E+00
0.6000E+00
0.7000E+00
0.8000E+00
0.9000E+00
0.1000E+01
0.1100E+01
0.1200E+01
0.1300E+01
0.1400E+01
0.1500E+01
0.1600E+01
0.1700E+01
0.1800E+01

ACTIVATION

NUCLEI/DAY

0.4835E+04
0.4340E+04
0.4062E+04
0.3174E+04
0.3153E+04
0.2824E+04
0.2570E+04
0.2128E+04
0.2123E+04
0.1764E+04
0.1956E+04
0.1462E+04
0.1620E+04
0.1498E+04
0.1289E+04
0.1555E+04
0.1244E+04
0.1491E+04

0.1900E+01	0.1200E+04
0.2000E+01	0.1171E+04
0.2100E+01	0.1435E+04
0.2200E+01	0.1225E+04
0.2300E+01	0.1180E+04
0.2400E+01	0.1191E+04
0.2500E+01	0.1138E+04
0.2600E+01	0.1371E+04
0.2700E+01	0.1175E+04
0.2800E+01	0.9430E+03
0.2900E+01	0.1017E+04

TOTAL OF AZ= 0.5613E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 45

MEV	REACTION	MEV	P2N	MEV	PRODUCT	MEV	NI56	Q-VALUE=	MEV	14.00 MEV
MBS		MBS		MBS		MBS			MBS	
14.10	0.01	17.78	0.01	19.88	0.26	21.84	0.53	23.66	0.74	
25.78	0.97	27.77	1.59	28.73	2.08	29.66	3.04	30.88	3.98	
32.99	5.91	35.00	7.70	36.93	9.24	38.76	10.40	40.83	11.10	
42.81	11.00	44.72	10.30	47.00	12.00	50.00	10.60	54.00	9.70	
57.50	9.70	61.00	8.70	63.50	9.20	69.00	8.50	73.00	8.30	
77.40	5.94	87.70	5.32	97.50	4.90	106.70	4.58	115.30	4.24	
124.00	4.14	132.20	3.96	140.20	3.90	147.90	3.69	153.90	3.75	
159.90	3.55	165.30	3.49	165.90	3.50	177.40	3.31	177.70	3.36	
182.90	3.24	188.40	3.25	193.60	3.16	198.90	3.12	400.00	3.50	

THE TOTAL ACTIVATION IS 0.2961E+05 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION	PROTON FLUX PROTONS/DAY*CM**2
1 200.00	0.4496E+03	.015184870	10794.0
2 195.00	0.4623E+03	.015612378	11143.3
3 190.00	0.4755E+03	.016060423	11513.3
4 185.00	0.4893E+03	.016525090	11906.1
5 180.00	0.5052E+03	.017062109	12323.5
6 175.00	0.5222E+03	.017635521	12768.0
7 170.00	0.5403E+03	.018246304	13242.1
8 165.00	0.5599E+03	.018909965	13748.7
9 160.00	0.5814E+03	.019634169	14291.3
10 155.00	0.6027E+03	.020354969	14873.5
11 150.00	0.6259E+03	.021139337	15499.8
12 145.00	0.6539E+03	.022082403	16175.0
13 140.00	0.6831E+03	.023068845	16904.9
14 135.00	0.7162E+03	.024186544	17696.1
15 130.00	0.7581E+03	.025601609	18556.3
16 125.00	0.8094E+03	.027335061	19494.7
17 120.00	0.8692E+03	.029356344	20521.7
18 115.00	0.9433E+03	.031859446	21650.2
19 110.00	0.1024E+04	.034593534	22895.1
20 105.00	0.1093E+04	.036929883	24274.7
21 100.00	0.1166E+04	.039375495	25811.0
22 95.00	0.1211E+04	.040897112	26475.5
23 90.00	0.1282E+04	.043294970	27194.4
24 85.00	0.1380E+04	.046599463	27975.7
25 80.00	0.1468E+04	.049575381	28829.0
26 75.00	0.1534E+04	.051824272	29765.9
27 70.00	0.1542E+04	.052088138	30801.2
28 65.00	0.1517E+04	.051224433	31953.4
29 60.00	0.1440E+04	.048645571	33246.3
30 55.00	0.1266E+04	.042772077	34711.2
31 50.00	0.1022E+04	.034530409	36390.0
32 45.00	0.7214E+03	.024363065	37815.7
33 40.00	0.4357E+03	.014713222	39475.7
34 35.00	0.1892E+03	.006389106	41445.9
35 30.00	0.5363E+02	.001811388	43343.0
36 25.00	0.1438E+02	.000485512	47588.0
37 20.00	0.8559E+00	.000028905	52609.5
38 15.00	0.7921E-01	.000002675	59873.0
39 10.00	0.0000E+00	.000000000	86539.0
40 5.00	0.0000E+00	.000000000	111493.4

DEPTH
GRAMS/SQ CM
0.1000E+00
0.2000E+00

ACTIVATION
NUCLEI/DAY
0.2632E+04
0.2279E+04

0.3000E+00	0.2134E+04
0.4000E+00	0.1653E+04
0.5000E+00	0.1646E+04
0.6000E+00	0.1484E+04
0.7000E+00	0.1360E+04
0.8000E+00	0.1148E+04
0.9000E+00	0.1152E+04
0.1000E+01	0.9835E+03
0.1100E+01	0.1094E+04
0.1200E+01	0.8311E+03
0.1300E+01	0.9060E+03
0.1400E+01	0.8037E+03
0.1500E+01	0.6660E+03
0.1600E+01	0.8012E+03
0.1700E+01	0.6339E+03
0.1800E+01	0.7651E+03
0.1900E+01	0.6135E+03
0.2000E+01	0.5989E+03
0.2100E+01	0.7320E+03
0.2200E+01	0.6214E+03
0.2300E+01	0.6003E+03
0.2400E+01	0.6050E+03
0.2500E+01	0.5790E+03
0.2600E+01	0.6946E+03
0.2700E+01	0.5923E+03
0.2800E+01	0.4781E+03
0.2900E+01	0.5152E+03

TOTAL OF AZ= 0.2961E+05

THE NUMBER OF CROSS SECTION DATA POINTS IS 46

REACTION	P, PN	PRODUCT	NI57	Q-VALUE=	9.98 MEV
MEV	MBS	MEV	MBS	MEV	MBS
9.97	0.01	11.90	0.02	13.98	0.62
19.88	116.00	21.84	140.00	23.66	159.00
28.73	167.00	23.66	155.00	30.88	142.00
36.93	94.60	38.76	87.40	40.83	84.40
47.00	82.50	54.00	79.50	57.00	82.50
71.00	73.50	75.50	69.00	77.40	56.40
106.70	42.80	115.30	40.50	124.00	38.70
147.90	35.00	153.90	34.50	159.90	33.30
177.40	31.10	177.70	32.10	182.90	30.40
198.90	29.30				

THE TOTAL ACTIVATION IS 0.3361E+06 NUCLEI /DAY

PROTON ENERGY	PARTIAL ACTIVATION	FRACTIONAL ACTIVATION	PROTON FLUX
MEV	NUCLEI PER DAY		PROTONS/DAY*CM**2
1	0.4077E+04	.012130863	10794.0
2	0.4240E+04	.012613344	11143.3
3	0.4566E+04	.013585326	11513.3
4	0.4730E+04	.014071802	11906.1
5	0.4884E+04	.014530592	12323.5
6	0.5040E+04	.014994488	12768.0
7	0.5215E+04	.015514719	13242.1
8	0.5405E+04	.016081437	13748.7
9	0.5620E+04	.016721375	14291.3
10	0.5842E+04	.017380862	14873.5
11	0.6080E+04	.018089125	15499.8
12	0.6352E+04	.018897438	16175.0
13	0.6650E+04	.019785466	16904.9
14	0.6980E+04	.020767169	17696.1
15	0.7382E+04	.021963578	18556.3
16	0.7856E+04	.023372946	19494.7
17	0.8413E+04	.025030162	20521.7
18	0.9045E+04	.026909107	21650.2
19	0.9790E+04	.029125571	22895.1
20	0.1090E+05	.032431457	24274.7
21	0.1168E+05	.034757137	25811.0
22	0.1209E+05	.035964020	26475.5
23	0.1264E+05	.037599146	27194.4
24	0.1332E+05	.039618466	27975.7
25	0.1413E+05	.042028993	28829.0
26	0.1488E+05	.044260271	29765.9
27	0.1492E+05	.044379294	30801.2

28	65.00	0.1524E+05	.045332570	31953.4
29	60.00	0.1544E+05	.045944516	33246.3
30	55.00	0.1580E+05	.047016576	34711.2
31	50.00	0.1590E+05	.047318112	36390.0
32	45.00	0.1435E+05	.042687595	37815.7
33	40.00	0.1260E+05	.037483145	39475.7
34	35.00	0.1067E+05	.031757336	41445.9
35	30.00	0.7946E+04	.023639370	43843.0
36	25.00	0.4294E+04	.012773885	47588.0
37	20.00	0.1151E+04	.003425832	52609.5
38	15.00	0.5592E+01	.000016638	59873.0
39	10.00	0.7214E-01	.000000215	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH	GRAMS/SQ CM	ACTIVATION	NUCLEI/DAY
0.1000E+00		0.3159E+05	
0.2000E+00		0.2632E+05	
0.3000E+00		0.2444E+05	
0.4000E+00		0.1874E+05	
0.5000E+00		0.1867E+05	
0.6000E+00		0.1694E+05	
0.7000E+00		0.1539E+05	
0.8000E+00		0.1296E+05	
0.9000E+00		0.1301E+05	
0.1000E+01		0.1110E+05	
0.1100E+01		0.1234E+05	
0.1200E+01		0.9384E+04	
0.1300E+01		0.1041E+05	
0.1400E+01		0.9230E+04	
0.1500E+01		0.7527E+04	
0.1600E+01		0.8963E+04	
0.1700E+01		0.7185E+04	
0.1800E+01		0.8568E+04	
0.1900E+01		0.6816E+04	
0.2000E+01		0.6604E+04	
0.2100E+01		0.8164E+04	
0.2200E+01		0.6918E+04	
0.2300E+01		0.6617E+04	
0.2400E+01		0.6727E+04	
0.2500E+01		0.6359E+04	
0.2600E+01		0.7713E+04	
0.2700E+01		0.6484E+04	
0.2800E+01		0.5284E+04	
0.2900E+01		0.5675E+04	

TOTAL OF AZ= 0.3361E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48									
REACTION P, A PRODUCT C055 Q-VALUE= 1.36 MEV									
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
1.35	0.01	7.44	0.07	7.97	0.27	8.44	0.80	9.23	2.87
9.73	4.50	10.08	6.33	10.80	10.70	11.00	11.60	11.90	14.50
12.20	14.30	13.98	22.60	15.85	28.00	17.78	27.30	19.88	21.20
21.84	12.20	23.66	7.54	25.78	4.18	27.77	3.07	28.73	3.11
29.66	2.60	30.88	2.70	32.99	2.52	35.00	3.52	36.93	4.70
38.76	5.74	40.83	9.24	42.81	13.50	44.72	19.50	77.40	32.60
87.70	30.60	97.50	27.00	106.70	24.60	115.30	23.90	124.00	23.30
132.20	22.40	140.20	20.70	147.90	20.80	153.90	22.30	159.90	20.60
165.30	20.40	165.90	21.20	177.40	18.80	177.70	20.90	182.90	18.00
188.40	19.60	193.60	17.60	198.90	19.00				

THE TOTAL ACTIVATION IS 0.1158E+06 NUCLEI /DAY

PROTON ENERGY		PARTIAL ACTIVATION		FRACTIONAL ACTIVATION		PROTON FLUX	
MEV		NUCLEI PER DAY				PROTONS/DAY*CM**2	
1	200.00	0.2385E+04		.020594770		10794.0	
2	195.00	0.2440E+04		.021066042		11143.3	
3	190.00	0.2512E+04		.021688668		11513.3	
4	185.00	0.2574E+04		.022226537		11906.1	
5	180.00	0.2662E+04		.022981713		12323.5	
6	175.00	0.2744E+04		.023693591		12768.0	
7	170.00	0.2831E+04		.024441155		13242.1	
8	165.00	0.2909E+04		.025117636		13748.7	
9	160.00	0.3004E+04		.025939414		14291.3	
10	155.00	0.3076E+04		.026556065		14873.5	

11	150.00	0.3143E+04	.027134381	15499.8
12	145.00	0.3269E+04	.028227605	16175.0
13	140.00	0.3438E+04	.029688554	16904.9
14	135.00	0.3624E+04	.031289451	17696.1
15	130.00	0.3804E+04	.032842461	18556.3
16	125.00	0.3982E+04	.034382924	19494.7
17	120.00	0.4171E+04	.036011163	20521.7
18	115.00	0.4387E+04	.037874293	21650.2
19	110.00	0.4610E+04	.039802819	22895.1
20	105.00	0.4861E+04	.041974165	24274.7
21	100.00	0.5152E+04	.044482481	25811.0
22	95.00	0.5175E+04	.044684879	26475.5
23	90.00	0.5112E+04	.044138461	27194.4
24	85.00	0.4900E+04	.042307463	27975.7
25	80.00	0.4562E+04	.039386082	28829.0
26	75.00	0.4175E+04	.036047917	29765.9
27	70.00	0.3731E+04	.032212321	30801.2
28	65.00	0.3252E+04	.028079739	31953.4
29	60.00	0.2720E+04	.023487506	33246.3
30	55.00	0.2194E+04	.018941272	34711.2
31	50.00	0.1777E+04	.015346501	36390.0
32	45.00	0.1410E+04	.012172014	37815.7
33	40.00	0.1087E+04	.009386467	39475.7
34	35.00	0.9979E+03	.008616051	41445.9
35	30.00	0.9861E+03	.008513795	43843.0
36	25.00	0.9873E+03	.008524466	47588.0
37	20.00	0.8317E+03	.007181174	52609.5
38	15.00	0.3285E+03	.002836723	59873.0
39	10.00	0.1405E+02	.000121333	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH

GRAMS/SQ CM

ACTIVATION

NUCLBI/DAY

0.1000E+00	0.1038E+05
0.2000E+00	0.9000E+04
0.3000E+00	0.8386E+04
0.4000E+00	0.6505E+04
0.5000E+00	0.6501E+04
0.6000E+00	0.5828E+04
0.7000E+00	0.5323E+04
0.8000E+00	0.4468E+04
0.9000E+00	0.4474E+04
0.1000E+01	0.3749E+04
0.1100E+01	0.4182E+04
0.1200E+01	0.3117E+04
0.1300E+01	0.3412E+04
0.1400E+01	0.3090E+04
0.1500E+01	0.2619E+04
0.1600E+01	0.3161E+04
0.1700E+01	0.2496E+04
0.1800E+01	0.3001E+04
0.1900E+01	0.2416E+04
0.2000E+01	0.2360E+04
0.2100E+01	0.2863E+04
0.2200E+01	0.2473E+04
0.2300E+01	0.2361E+04
0.2400E+01	0.2373E+04
0.2500E+01	0.2283E+04
0.2600E+01	0.2743E+04
0.2700E+01	0.2359E+04
0.2800E+01	0.1870E+04
0.2900E+01	0.2026E+04

TOTAL OF AZ= 0.1158E+06

THE NUMBER OF CROSS				SECTION DATA POINTS IS 43				Q-VALUE= 1.84 MEV			
REACTION		HE3		PRODUCT		C056					
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
11.70	0.01	15.85	0.01	17.78	0.02	19.88	0.76	21.84	4.81		
23.66	9.30	25.78	15.80	27.77	34.00	28.73	47.80	29.66	67.70		
30.88	91.60	32.99	142.00	35.00	172.00	36.93	194.00	38.76	198.00		
40.83	211.00	42.81	197.00	44.72	177.00	48.00	186.00	54.00	138.00		
57.00	128.00	62.50	124.00	67.00	116.00	71.00	118.00	77.40	84.10		
87.70	74.00	97.50	65.90	106.70	60.90	115.30	57.10	124.00	54.80		
132.20	52.50	140.20	50.90	147.90	48.50	153.90	47.80	159.90	45.90		

165.30 45.20 165.90 44.40 177.40 42.50 177.70 43.50 182.90 41.80
 188.40 41.50 193.60 40.40 198.90 40.20

THE TOTAL ACTIVATION IS 0.4411E+06 NUCLEI /DAY

PROTON ENERGY MEV	PARTIAL ACTIVATION NUCLEI PER DAY	FRACTIONAL ACTIVATION
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PROTON FLUX
 PROTONS/DAY*CM**2

1	200.00	0.6002E+04	.013606137	10794.0
2	195.00	0.6173E+04	.013995160	11143.3
3	190.00	0.6362E+04	.014423235	11513.3
4	185.00	0.6559E+04	.014869533	11906.1
5	180.00	0.6771E+04	.015350269	12323.5
6	175.00	0.7000E+04	.015868833	12768.0
7	170.00	0.7265E+04	.016469996	13242.1
8	165.00	0.7555E+04	.017126197	13748.7
9	160.00	0.7856E+04	.017809987	14291.3
10	155.00	0.8181E+04	.018545238	14873.5
11	150.00	0.8534E+04	.019347686	15499.8
12	145.00	0.8934E+04	.020253407	16175.0
13	140.00	0.9369E+04	.021239687	16904.9
14	135.00	0.9861E+04	.022355529	17696.1
15	130.00	0.1046E+05	.023708863	18556.3
16	125.00	0.1119E+05	.025370423	19494.7
17	120.00	0.1204E+05	.027304472	20521.7
18	115.00	0.1315E+05	.029810177	21650.2
19	110.00	0.1450E+05	.032875188	22895.1
20	105.00	0.1562E+05	.035412837	24274.7
21	100.00	0.1674E+05	.037943278	25811.0
22	95.00	0.1745E+05	.039567284	26475.5
23	90.00	0.1851E+05	.041969474	27194.4
24	85.00	0.2000E+05	.045331452	27975.7
25	80.00	0.2140E+05	.048520159	28829.0
26	75.00	0.2253E+05	.051077303	29765.9
27	70.00	0.2333E+05	.052893627	30801.2
28	65.00	0.2390E+05	.054182999	31953.4
29	60.00	0.2392E+05	.054215509	33246.3
30	55.00	0.2236E+05	.050693233	34711.2
31	50.00	0.1894E+05	.042938907	36390.0
32	45.00	0.1425E+05	.032299511	37815.7
33	40.00	0.9118E+04	.020670839	39475.7
34	35.00	0.4147E+04	.009401351	41445.9
35	30.00	0.9776E+03	.002216154	43843.0
36	25.00	0.1455E+03	.000329834	47588.0
37	20.00	0.2157E+01	.000004890	52609.5
38	15.00	0.3164E+00	.000000717	59873.0
39	10.00	0.2289E+00	.000000519	86539.0
40	5.00	0.0000E+00	.000000000	111493.4

DEPTH GRAMS/SQ CM	ACTIVATION NUCLEI/DAY
0.1000E+00	0.3961E+05
0.2000E+00	0.3401E+05
0.3000E+00	0.3178E+05
0.4000E+00	0.2457E+05
0.5000E+00	0.2449E+05
0.6000E+00	0.2214E+05
0.7000E+00	0.2026E+05
0.8000E+00	0.1710E+05
0.9000E+00	0.1718E+05
0.1000E+01	0.1469E+05
0.1100E+01	0.1636E+05
0.1200E+01	0.1243E+05
0.1300E+01	0.1360E+05
0.1400E+01	0.1209E+05
0.1500E+01	0.9910E+04
0.1600E+01	0.1190E+05
0.1700E+01	0.9505E+04
0.1800E+01	0.1133E+05
0.1900E+01	0.9105E+04
0.2000E+01	0.8874E+04
0.2100E+01	0.1083E+05
0.2200E+01	0.9212E+04
0.2300E+01	0.8888E+04
0.2400E+01	0.8996E+04

0.2500E+01	0.8538E+04
0.2600E+01	0.1026E+05
0.2700E+01	0.8773E+04
0.2800E+01	0.7052E+04
0.2900E+01	0.7614E+04

TOTAL OF AZ= 0.4411E+06

THE NUMBER OF CROSS SECTION DATA POINTS IS 48

REACTION		HE-4		PRODUCT		CO57		Q-VALUE= 0.29 MEV	
MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS	MEV	MBS
0.30	0.01	7.44	0.39	7.97	0.94	8.44	1.72	9.23	3.32
9.73	4.10	10.08	4.83	10.80	6.89	11.00	7.50	11.90	15.90
12.20	14.10	13.98	61.40	15.85	228.00	17.78	347.00	19.88	396.00
21.84	377.00	23.66	348.00	25.78	320.00	27.77	277.00	28.73	261.00
29.66	202.00	30.88	206.00	32.99	161.00	35.00	129.00	36.93	114.00
38.76	103.00	40.83	101.00	42.81	103.00	44.72	106.00	77.40	87.00
87.70	82.00	97.50	67.00	106.70	65.00	115.30	58.00	124.00	59.00
132.20	56.40	140.20	52.80	147.90	50.50	153.90	49.40	159.90	47.70
165.30	46.60	165.90	46.00	177.40	45.20	177.70	45.20	182.90	44.80
188.40	44.20	193.60	42.60	198.90	42.60				

THE TOTAL ACTIVATION IS 0.5399E+06 NUCLEI /DAY

PROTON ENERGY		PARTIAL ACTIVATION		FRACTIONAL ACTIVATION	
MEV		NUCLEI PER DAY			
1	200.00	0.6366E+04		.0111790456	
2	195.00	0.6550E+04		.0121303002	
3	190.00	0.6754E+04		.0125082225	
4	185.00	0.6944E+04		.012859973	
5	180.00	0.7151E+04		.013244134	
6	175.00	0.7376E+04		.013661021	
7	170.00	0.7645E+04		.014158711	
8	165.00	0.7953E+04		.014728785	
9	160.00	0.8276E+04		.015327828	
10	155.00	0.8630E+04		.015983960	
11	150.00	0.9022E+04		.016709892	
12	145.00	0.9471E+04		.017540598	
13	140.00	0.9980E+04		.018483192	
14	135.00	0.1053E+05		.019500688	
15	130.00	0.1108E+05		.020525360	
16	125.00	0.1168E+05		.021638026	
17	120.00	0.1243E+05		.023019133	
18	115.00	0.1337E+05		.024771376	
19	110.00	0.1445E+05		.026764497	
20	105.00	0.1624E+05		.030069787	
21	100.00	0.1771E+05		.032791317	
22	95.00	0.1827E+05		.033828512	
23	90.00	0.1870E+05		.034640640	
24	85.00	0.1903E+05		.035249233	
25	80.00	0.1958E+05		.036265846	
26	75.00	0.2081E+05		.038537089	
27	70.00	0.2099E+05		.038865905	
28	65.00	0.2182E+05		.040412422	
29	60.00	0.2282E+05		.042268768	
30	55.00	0.2466E+05		.045679677	
31	50.00	0.2713E+05		.050247833	
32	45.00	0.2664E+05		.049345490	
33	40.00	0.2480E+05		.045925703	
34	35.00	0.2303E+05		.042657215	
35	30.00	0.1982E+05		.036701955	
36	25.00	0.1441E+05		.026687322	
37	20.00	0.7133E+04		.013210136	
38	15.00	0.6592E+03		.001220904	
39	10.00	0.2597E+02		.000048096	
40	5.00	0.0000E+00		.000000000	

PROTON FLUX
PROTONS/DAY*CM**2

10794.0
11143.3
11513.3
11906.1
12323.5
12768.0
13242.1
13748.7
14291.3
14873.5
15499.8
16175.0
16904.9
17696.1
18556.3
19494.7
20521.7
21650.2
22895.1
24274.7
25811.0
26475.5
27194.4
27975.7
28829.0
29765.9
30801.2
31953.4
33246.3
34711.2
36390.0
37815.7
39475.7
41445.9
43843.0
47588.0
52609.5
59873.0
86539.0
111493.4

DEPTH
GRAMS/SQ CM

ACTIVATION
NUCLEI/DAY

0.1000E+00	0.5271E+05
0.2000E+00	0.4298E+05
0.3000E+00	0.3975E+05
0.4000E+00	0.3004E+05
0.5000E+00	0.3008E+05
0.6000E+00	0.2739E+05
0.7000E+00	0.2455E+05

0.8000E+00	0.2072E+05
0.9000E+00	0.2088E+05
0.1000E+01	0.1766E+05
0.1100E+01	0.1980E+05
0.1200E+01	0.1492E+05
0.1300E+01	0.1664E+05
0.1400E+01	0.1492E+05
0.1500E+01	0.1213E+05
0.1600E+01	0.1427E+05
0.1700E+01	0.1116E+05
0.1800E+01	0.1373E+05
0.1900E+01	0.1090E+05
0.2000E+01	0.1046E+05
0.2100E+01	0.1270E+05
0.2200E+01	0.1109E+05
0.2300E+01	0.1024E+05
0.2400E+01	0.1068E+05
0.2500E+01	0.1006E+05
0.2600E+01	0.1220E+05
0.2700E+01	0.1019E+05
0.2800E+01	0.8187E+04
0.2900E+01	0.8910E+04
TOTAL OF AZ=	0.5399E+06